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MEDICAL RECORD

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EDITED BY

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Original Articles.

SOME REMARKS ON AFFECTIONS OF THE HEART.

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I.

GROSS MUSCULAR CHANGES.

A PRELIMINARY word is desirable about these articles in order to prevent misconception. In a special treatise the matter must be thoroughly gone into from the bottom upward, as many readers will approach the subject in simple ignorance of it. But here it is assumed that the reader already possesses a fair text-book acquaintance with the heart and its various affections. With this explanation no mistake ought to occur.

The heart is liable to undergo certain changes of form known familiarly as hypertrophy and dilatation, and also atrophy in wasting disease. The latter needs no consideration here; it is but part, and not an important part, usually, of a general condition.

Dilatation, or elongation of the muscular fasciculi of the heart, is found in conditions where the chambers yield; conditions which vary considerably, viz., the heart-fibres yield under undue distention (which they are unequal to overcome), or are themselves weakened and so deprived of their normal vigor. Whether in a case of high arterial tension hypertrophy or dilatation takes place is a question of tissue-nutrition.

Hypertrophy is usually described as a muscular development to overcome some obstacle, as stenosis at the aortic orifice, or high arterial tension, as in the gouty heart. In both cases there is an obstruction offered to the ventricular systole, which the muscle meets by enlargement; a very intelligent action on the part of the heart, it must be admitted. But this view of some "intelligence" in the heart, by which its nutrition is modified to meet emergencies, is misleading. Is there some intelligence in the arm-muscles of the blacksmith, or in the muscles of the calf of the leg of a ballet-dancer? None that I ever heard of. What then is the explanation of these well-known facts? It is this: motor nerves are linked with trophic nerves; the message to the muscle to contract is accompanied by another message along the trophic nerve, which dilates its associated blood-vessels, and increases its blood supply. Consequently, increased functional activity in a muscle is followed by increased growth in it. This is spoken of as "hypertrophy," and whether it depends upon growth in existing fibrillæ or increase in the number of fibrillæ need not detain us here. But if the general nutrition is deficient, great action of a muscle leads not to hypertrophy, but to wasting, as seen in the well-known case of the top-sawyer so graphically described by T. King Chambers, in his famous "Clinical Lectures," in the chapter on "Atrophy of Muscles." His appetite suddenly failed, and his "shoulder muscles," those in most use by him, grew soft and weak from malnutrition. The reader who has this work at hand can profitably consult it at this point. He will see that great use of a muscle may lead to atrophy as well as to hypertrophy, according to the demand upon the muscle, and its nutritive supply. This is the great lesson which I desire the reader to take to heart, about hypertrophy and dilatation of the heart; and after this has been thoroughly realized it will not be difficult to put the subject of gross muscular changes in the heart-walls before him in a manner which will explain them without any hypothesis of "intelligence" in the heart.

The muscular structure of the heart-wall is ruled by its own ganglia in the heart itself. The primitive pulsatile sac has a nerve-centre with an afferent and an efferent nerve-fibril. By the afferent nerve-fibril the sense of distention is conveyed to the centre, whereupon an efferent message is despatched to the muscle to contract. Such a heart is a simple hollow muscle with its ruling nerve-centre. When the sac is full it contracts by means of the simple nerve-mechanism. The human heart is a very complex hollow muscle, with valves to economize power; while its primitive nerve-ganglia have connections with the rest of the nervous system by which the condition of diastole and systole—filling and emptying—is regulated according to the wants of the system. These are in the vagus inhibitory and also accelerator nerve-fibrils. The first come into action and to hold back the ventricular systole when the arterial system is full—the slow stroke of high arterial tension. The latter is found in action with a low blood-pressure—the fast, easily compressible pulse, which contrasts with the opposite condition.

Still, the great matter to bear in mind is the primitive hollow muscle with its nerve-centre and its afferent and efferent fibrils. The sense of distention is followed by a contractile action. When the hollow muscle is unwontedly distended a proportionately vigorous contraction follows. That is one matter. If the nutrition is well sustained the muscle waxes greater, in other words, becomes hypertrophied. That is another. It is the distention which leads to the muscular growth! That is the predominant idea to be borne lucidly in mind; and then why dilatation should occur in one case, while hypertrophy without perceptible enlargement of the ventricular chamber is seen in a second, and a blend of the two is encountered in a third case, becomes a matter readily and easily comprehended.

The heart-chambers are not of fixed size, they vary according to circumstances. This is readily seen by taking a spare, muscular subject, fixing the precise spot of the heart's apex-beat, and placing the tip of the finger thereupon. The heart can be felt at each systole quite distinctly. Then tell him to hold his breath. What is the result? As the right ventricle becomes more and more distended and intervenes as a "water-cushion" betwixt the heart's apex and the chest-wall, the apex-beat is lost. As soon as the right ventricle is relieved by the respirations being resumed, it recovers its normal size, and the apex-beat is quickly as palpable as before.

The heart, then, undergoes changes of form, and may be temporarily distended. This may be observed by causing a man to make an effort (as with a health-lift, for instance), and examining the heart while the effort is being made. Dilatation of the heart is *prolonged distention*. But at what point the condition of distention will be arrested by compensatory growth in the muscular wall depends upon the circumstances of each individual case.

In one case (a well-nourished person), the compensa-

tory growth will be set up so early that no perceptible dilatation occurs. In another, a condition of distinct dilatation is reached before hypertrophy's arresting hand can be brought to bear. In a third, there is dilatation without perceptible growth or thickening in the muscular walls. According to the amount of hypertrophy in proportion to the extent of the dilatation will be the amount of vigor in the heart. We speak of this muscular growth in the terms: 1, complete compensation; 2, incomplete compensation; and 3, no compensation. With the first the patient possesses great vigor, with the second some vigor, and with the third he, or rather she, is a crippled being. Why do I here say "rather she," not being a person in the habit of speaking of the "weaker" sex in a derogatory manner? Because dilatation of the heart is usual with women under circumstances where hypertrophy is rather the rule with men. In this sense of tissue-nutrition women are "weaker" than men. Take the gouty heart, for instance, with all its concomitants (to be discussed in a later article), with men we commonly find pure hypertrophy; with women there is, as a rule, dilatation, with more or less (and often less) hypertrophy.

The question of when, and at what point, the process of dilatation will be checked by compensating muscular growth, is mainly a matter of tissue-nutrition. There is another factor in action, however, and that is "time;" in other words, the urgency of the demand upon the heart-walls, the call for hypertrophy. If it come quickly, as, for instance, when an aortic valve cusp is torn down by a violent effort, some dilatation is inevitable, no matter what the nutritive powers of the individual. When the aortic valves are being soldered together slowly by a sclerosing valvulitis in an elderly, well-fed man, the demand is so gradual that the hypertrophied wall is found practically without any enlargement of the ventricular chamber. So the problem rests on the urgency of the demand versus the nutritive powers of the organism. Having grasped this main idea, the reader will experience no difficulty in recognizing the proportion of hypertrophy to that of the dilatation in any case which comes before him. Or in realizing the fact that the two are found together in every possible proportion, like the mixing of "old rye" and water. Or in understanding how, when the system is unequal to setting up complete compensatory hypertrophic growth of itself, it may be much aided by reducing the demand upon the heart (by rest in the recumbent posture), and by increasing the energy of the ventricular contractions (by remedial agents possessing such action) and improving the general nutrition. The malady and the means of remedying it, so read, are clear and unmistakable—to my mind at least.

When the heart-muscle has been temporarily weakened by acute disease, whether a general condition of pyrexia or the causal condition is one of myocarditis accompanying pericarditis or endocarditis, it is apt to become dilated; temporarily, certainly, in all cases. But whether the condition of dilatation will remain permanently or be removed, and at what rate it will be recovered from, will depend upon the amount of the demand upon the heart (*i.e.*, the extent to which effort must be made), and the amount of rest which can be given to it, as one matter, and the assimilative processes, aided by agents which increase the energy of the ventricular contractions, as the other.

By time, patience, and well-directed measures (supposing the patient to be able to command all), the system may be enabled to build up compensatory hypertrophy where, when unguided by knowledge and unaided by art, it is unequal to such effort. Such at least has been my personal experience.

It may now be well to proceed to discuss the circumstances under which such gross muscular changes are usually found, viz., obstruction to be overcome or an increase in the distending force to be resisted. Two matters which produce somewhat different results.

To commence with the aortic orifice. With stenosis or obstruction at this orifice the left ventricle is ordinarily found simply hypertrophied; sometimes, in women mainly, there is some dilatation. We can understand this readily when we remember that the lesion is slowly developed, allowing ample time for the building up of the compensating hyperplasia; and, to my mind still more, no great increase in the distending force. Here all that is required is some addition to the driving-power of the ventricle by which a normal bulk of blood may be driven in a normal time through a narrowed orifice. It is a slow process altogether, and the comparatively small hypertrophy is well maintained.

Far otherwise is the history of aortic regurgitation. Here the free edges of the valve-cusps are affected, with or without some dilatation of the aortic conus, and a regurgitant current of blood is driven backward into the left ventricle by the aortic recoil. It may be but a thin riband of blood, but it is sent into the chamber by a very different force to that which pours its current into the ventricle through the mitral orifice. The latter wells in rather, while the regurgitant current is driven in by the powerful recoil of the elastic arteries distended by the ventricular systole. Forcible distention of the muscular wall follows, and that brings with it, in its turn, hypertrophic growth, and we find a massive, powerful ventricle. So far so good. If the valvular mischief be the result of an acute valvulitis, and the mutilation of the valve be at once small and static, and the muscular development is in proportion to it, years may roll over the patient's head without perceptible change for the worse. Such, however, is not the usual history of a case of aortic regurgitation. Rather is it as follows: The enlarged ventricle is capable of throwing its contents into the arterial system with much energy, while in consequence of the enlargement of its chamber the amount of blood ejected at each systole is much above the normal amount; the distended elastic arteries recoil with an energy proportioned to the distending force, and a powerful current is driven backward into the ventricle. More distention of the muscular chamber leads to more hypertrophy, and then the huge *cor bovinum* of aortic regurgitation is found; but the limits of compensatory growth are at last reached. The huge muscle is insufficiently fed, and in time it undergoes degenerative change; and then the heart comes to a standstill in diastole, the decayed fibrillæ being unable to contract on full distention. From this we can comprehend the prognostic difference betwixt aortic stenosis and aortic insufficiency in regard to time. In the one there is only an obstacle to be overcome; in the other a new distending force is in action. In the one hypertrophy is moderate and well sustained; in the other it is huge and soon wears out.

Now let us consider the results of morbid action in the mitral valves. In stenosis the left ventricle is of normal size, or even below it, for the narrowed orifice obstructs the blood-flow into the chamber. But if the obstruction be slight, little change will be found in the left ventricle. Far otherwise is it in mitral regurgitation. Here the left ventricle has no obstruction to overcome; indeed there are two outlets for the blood now instead of one, and yet it is enlarged. How is that? Because the blood entering it on diastole is sent in with abnormal force from the gorged pulmonic circulation, plus the enlarged left auricle. There is no obstruction to the blood-flow offered at the mitral ostium, and the more powerful current dilates the left ventricle, with the consequence of increased muscular growth.

When the pulmonic circulation is impeded, whether by mitral disease or disease in the respiratory organs, the right ventricle enlarges. Incompletely emptied on systole, the swollen veins behind it pour in their contents, and distention follows, with enlargement of the muscular wall. As there is always an increase in the distending force in the case of the right ventricle, so there is always enlargement of the chamber, as well as a thickening of its muscular wall. But here again the proportions of

dilatation to those of hypertrophic growth vary according to the urgency of the demand and the powers of nutrition. The same measures are to be adopted here as were recommended in the case of the enlarged left ventricle, viz., rest, good food, and agents which increase the energy of the cardiac contractions.

Such, then, are the ordinary circumstances under which the walls of the heart undergo changes in form. The dilating process comes first, and, if the powers are equal to it, hypertrophic growth follows. At what stage of the dilating process the compensating growth begins to be efficient varies in each and every case; depending upon causes sketched out here in bold outline rather than in detail. To include the latter would be to extend this article beyond any limits that can be furnished by a journal. But that is no reason why the reader, having grasped effectively the outline here provided, should not work out the details in those cases which come immediately under his notice.

Rest, digitalis, and iron (with some strychnia), with good food, form a good line of treatment when nature cannot surmount her difficulty single-handed; but what must be done in each case depends upon its own requirements, of which the medical man in attendance can alone be the judge.

PRACTICAL OBSERVATIONS ON THE HUMAN EAR AND ITS DISEASES, WITH ILLUSTRATIVE CASES.

By SAMUEL SEXTON, M.D.,

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I.—The External Ear.

(Continued from Vol. xxv., p. 374.)

HÆMATOMA AURIS.

Synonym.—Othæmatoma; Perichondritis Auriculæ.

Hæmatoma auris is a disease of the cartilage and perichondrium of the auricle, with consequent formation of a cyst containing blood or varying portions of its constituents. These sanguineous cysts, as they are sometimes called, may be limited to a slight extravasation scarcely distinguishable from deep congestion, or they may consist in a tumor of greater or less dimensions. The tumor, although not always containing pure blood, has generally received the designation of blood-tumor. It may be produced either by severe contusion of the auricle, or it may, it is alleged, take its origin from idiopathic causes alone; most frequently, however, it seems to be due to violence, even where a predisposition to its occurrence exists. It is characterized by more or less inflammation of the cartilage and perichondrium of the ear, and by the sudden escape of sanguineous fluid between the cartilage and perichondrium, and, it is said, into the substance of the cartilage itself. The size of the tumor varies from that of a Lima bean to an egg; its formation is usually rapid, and the contents, at first fluid, show a marked tendency to become clotted, and quite often, unless incised, spontaneous rupture takes place.

In the milder attacks extravasation is so slight that it has been characterized as a serous œdema. The disease most frequently occurs in the insane, and produces such characteristic deformities that it is well known in insane institutions as the "insane ear," "shrivelled ear," and "asylum ear." The inflammation in this disease is generally adynamic in character; in certain cases, however, inflammation is liable to be more active. In a very considerable number of cases there is a strong tendency shown to spontaneous recovery.

HISTORY.

Traumatic othæmatoma.—The ancients were very familiar with this morbid condition of the auricle, since it was the necessary result of boxing-matches, which then constituted the favorite mode of combat. Among the Greeks and Romans pugilism was considered an essential part of education, as it increased the strength and developed boldness of character in their youth. Defence and assault with the fist or cestus were then extremely common, and combats for amusement even were the fashion of the day; the Grecian boxers, who were justly renowned, had for their titulary deity Pollux himself. The Æneid abounds in praise of these barbaric contests; thus in the combat between Eutellus and Æneas—

> "A storm of strokes, well meant, with fury flies,
> And errs about their temples, ears, and eyes—
> Nor always errs, for oft the gauntlet draws
> A sweeping stroke along the crackling jaws."

The implement employed by the classic slugger in these auricle-cracking feats was the cestus, a formidable gauntlet composed of thongs of several thicknesses of raw hide strongly fastened together and loaded with lead, iron, or brass, and bound to the arm by thongs. Four varieties of this crushing implement are known to have been in use, the least deadly being more dangerous even than the modern assassin's "brass knuckles," and capable of administering a fatal blow. These murderous weapons were known to Virgil as the "gloves of death." Paulus Ægenita refers to the aural injuries produced by this weapon as contusions of the ear, and Hippocrates described them as fractures of the auricle, adding that the injury was a common one in his day. "The combat with the cestus," he says, "was a favorite amusement of the ancients, and a blow about the ears was reckoned a master-stroke, sometimes being fatal." At a later date the amphotides, a helmet or headguard, was worn to protect the temporal bones, arteries, and ears. It was constructed with thongs and ligatures made of the hides of bulls, studded with knobs of iron, and thickly quilted inside to dull the concussion of blows. The pugilists and the pancratiastes, armed with the cestus, were in the habit of producing such disfigurement of the ears that it became a customary plastic ornament in antique sculpture, which thus affords abundant evidence of the results of these practices; for example, the heads of Hercules, Pollus, Hector, and other warriors have been represented with ears having this typical deformity of ancient contestants.[1]

The ancient custom of boxing has been continued by the Anglo-Saxon race, especially in Great Britain, where for a long time past it has been encouraged as a national amusement and has a literature of its own. During this period of time, however, the unprotected fist has been employed in combat, and the occurrence of the more serious aural injuries has in consequence diminished. Pugilism has now everywhere fallen into disrepute, and its votaries are principally confined to low resorts, where the boxers enter the lists with gloved fists and go through the forms of a "mill" for the amusement of the audience. Even here, however, we find that some vigorous blows about the head are demanded, and the ear is frequently struck, especially in "cross counter," in which the left ear suffers most. The frequent pounding of the left auricle in this manner often gives rise to othæmatoma. A very considerable number of persons are at present engaged in this occupation for a livelihood, and most of them have characteristically deformed auricles.

The tendency to violent contests has shown itself in other pastimes where the ear does not always escape injury; thus Farquharson[2] describes several cases of the disease under consideration, coming on suddenly, with oval swelling of the auricle, as a consequence of playing the game of foot-ball at Rugby, where there is much forcible butting with the head in "tight scrimmage."

"Idiopathic" othæmatoma.—The first description of othæmatoma, in which mental and other nervous dis-

[1] Vide Gudden: Hæmatic Swelling of the Ears of the Insane, Allg. Zeit. für Psychiatrie, Bd. xvii. Med. Critic. January, 1861. Ranking's Abst., vol i., p. 43, 1861.

[2] British Medical Journal, vol. ii., p. 59, 1873.

turbances play so important a part, was, I believe published fifty years ago by Dr. Frederick Bird,[1] then connected with the asylum at Sieburg. Bird gave a very good account of six cases coming under his observation, and drew attention to the intimate relations of the disease to insanity. The suggestions thrown out by Bird finally received the attention of other writers: M. Ferris, a Frenchman, gave the subject his attention in 1838, and ten years later (1848) the valuable essay on the subject by Franz Fischer[2] was written. The observations of alienists were naturally limited to the occurrence of the disease in insane persons; in 1852, however, an Englishman, Mr. S. Ozier Ward, drew attention to the liability of the mentally sane to the trouble.[3]

Numerous contributions have been made to the literature of the subject during the past thirty years. In 1858 an interesting paper was published by Stiff, "On Simple Sanguineous Cyst of the Ear in Lunatics,"[4] and in 1859 the distinguished labors of M. A. Foville were made known.[5]

It will be found on consulting the "Index Catalogue of the Library of the Surgeon-General's Office"[6] that, although incomplete as yet in respect to this subject, fifteen monographs and forty-six journal articles and other papers pertaining to othæmatoma were published between the years 1848 and 1879 by German, English, Italian, and American authors.

When it became known that mentally sound persons were obnoxious to the affection otologists soon gave the subject attention. Wilde[7] regarded it, however, as "a rare form of disease in man," and classified it among tumors of the auricle. The case cited by him, with clinical history and illustrative wood-cut, portrays a well-marked instance of the trouble in a mentally sane person.

Recognizing the similarity of his own case to the disease described by Bird as occurring in the insane, but having no experience in the latter affection himself, he made inquiries among a number of medical friends connected with lunatic asylums; from their statements, which, however, "varied as to its existence and cause," he considered that it was established that the disease affected a particular class of the community. Toynbee[8] afterward described the affection more fully than Wilde had done, and while regarding it as most generally confined to the insane, he himself had seen a case in a boxer, due to a blow upon the ear.

ETIOLOGY OF OTHÆMATOMA.

Of purely traumatic othæmatoma no mention need be made here, but in regard to the origin of the so-called idiopathic variety there has been much difference of opinion.[9] Bird was at a loss to account for its origin, never having traced it to outward injury, but in five of his six cases it is noted that there was active congestion of the head. Subsequently, Franz Fischer and others pursued the subject further and determined that the causes must ultimately be sought in pathological states of the nervous system.

One cannot witness the intense congestion of the ears, sometimes accompanying great cerebral excitement in the insane, without belief in the possibility of spontaneous extravasation of blood taking place beneath the perichondrium; and it is probable that where tissue changes, to be immediately referred to, have already taken place in the cartilage and perichondrium othæmatoma may sometimes thus occur. These nutritive changes in the auricle, believed to pave the way to extravasation, so to speak, will first demand our attention. They seem to be mainly brought about through the agency of the nervous system, although some authorities lay much stress on the influence of blood dyscrasias in producing changes in the blood-vessels of the part. The weight of evidence, however, leads to the conclusion that they most frequently depend on a morbid state of the brain, especially on congestion of the organ. Functional disturbance of the brain, or of the cerebro-spinal centre, giving rise to disorder of the cervical sympathetic, may, by reason of the dominance thus exercised on the vessel regulating nerves distributed to both intercranial ganglia and the auricle, set up hyperæmia in the former, and vascular changes in the latter.[1] When othæmatoma occurs in the course of general paralysis, it would seem that aural congestion took place in consequence of general degeneration of the sympathetic; and it has been suggested that in inflammation of the brain the aural disease becomes advantageous to the patient, since the hemorrhage is thus spent upon the posterior auriculars, coming from the middle meningeal.[2]

But while centric morbid conditions are justly regarded as of greatest importance, other impressions, propagated by morbid processes in other organs through the sympathetic system, are worthy of consideration; thus in the examination of insane subjects having this affection, the almost universal prevalence of nasal catarrhs, diseased teeth, and in the female of uterine disease, is notable, and it is well known that the irritation due to these influences is transmitted through the nerves, and may not only exasperate cerebral disease itself, but is liable to also affect the organ of hearing.

The predisponents believed to have an important relation to othæmatoma require consideration somewhat in detail:

Age.—Othæmatoma seldom occurs before adolescence; in regard to its appearance in the insane, it may be said that insanity is not obnoxious to youth, nor is degeneration of the cartilage liable to occur at this early age. Cases of contusion of the auricle are not frequently met with in children, but doubtlessly may occur at any age. Of the numerous cases reported as occurring in extreme youth, many of them were probably incorrectly diagnosed. Langenbeck reports a case occurring in a girl twelve years of age, who was said to be *wild*. Blau[3] describes a case observed in a gymnast, aged fifteen years, where there was no pschyco- nor neuropathic family history. The case had, it is said, no history of trauma, but it is significant that otorrhœa existed. Schwartze has seen a case in a child fourteen years of age, and Julius Erhard[4] speaks of cases arising in nurslings from rough handling or injury, causes from which the writer has never seen the affection arise. If the disease ever exists in young children, its occurrence seems to be quite exceptional. I have myself never seen such a case. The disease, moreover, has not been to my knowledge ever reported in extreme old age, which would seem to confirm the view that degeneration in structure alone is not a sufficient cause, but that its occurrence must be looked for in the active period between adolescence and the decline of life.

Insanity.—All forms of mental disease seem to be predisposing, but the conditions most favorable to othæmatoma are present in acute dementia where long-existing vaso-motor disturbances are followed by paroxysms of excitement.

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[1] Upon a Curious Sort of Inflammation of the Outer Ear Occurring in Insane Patients. Frederick Bird. Graefe's and Walther's Journal, B. 19, p. 361. See Abs. M. Ch. Rev., vol. xxiv., p. 201, 1834.

[2] Die Ohrblutgeschwulst der Seelengestörten nebst einer Blobachtung der Kopfblutgeschwulst bei einem solchen Kranken. Allg. Ztschr. f. Psychiat., etc., Berl., 1848, v. i. Also Dr. Arlidge's translation, Asylum Journal, 1854, pp. 45-107.

[3] Medical Times and Gazette, vol. ii., p. 295, 1852.

[4] B. and F. Med. Chir. Rev., vol. xxi., pp. 169-174. Am. Ed., 1858.

[5] Recherches sur les tumeurs sanguines du pavillion de l'oreille chez aliénés. Ann. Méd.-psych., Par., 1859, 3. S., v. 390-408. Also: Gaz. hebd. de méd., Par., 1859, vi. 450, 469. Also: transl. Am. J. Insan., Utica, N. Y., 1859-60, xvi., 184-200. Vide also, Hématôme du pavillion de l'oreille chez un aliéné. Union méd. de la Seine-inf., Rouen, 1877, xvi., 24, 37.

[6] Vol. i., Government Printing Office, Washington, 1880.

[7] Diseases of the Ear. Phila., 1853.

[8] Ibid. Phila., 1860.

[9] The writer's own experience in othæmatoma having been limited to cases occurring in the mentally sane, it was deemed advisable to observe the disease in the insane. Ample facilities for this were kindly afforded by Dr. T. M. Franklin, Medical Superintendent of the New York City Lunatic Asylum (for females), Blackwell's Island, and by Dr. A. E. MacDonald, Medical Superintendent of the New York City Asylum for the Insane (males), Ward's Island. To Assistant Superintendents Dent and Troutman, and other members of the staff of these institutions, the author's acknowledgments are hereby extended for courteous attention.

[1] Vide Robertson, Glasgow M. J., vol. vii., July, 1875.

[2] Bonnet: Annales Médico-Psychologiques, 1877. A. J. O., vol. i., p. 68.

[3] Arch. f. Ohrenheilk., B. xix., Hft. 4, pp. 203, 204.

[4] Vorträge über der Krankheiten der Ohres, p. 132. Leipzig, 1875.

When the trouble occurs in the mentally sound, preceded by slight contusion, cerebral or other nervous disturbance has most likely existed, giving rise to trophic changes in the affected part. A tendency to insanity in such cases, however, is by no means always to be suspected.

Intemperance.—Intemperance in the use of alcoholic stimulants has a strong predisposing influence; I have repeatedly witnessed this in my own practice.

Cachexia.—A dyscrasia commonly attends cerebral disturbances in both insane and intemperate persons, and although othæmatoma by no means always appears in such subjects when the bodily health is most impaired, yet must we not entirely ignore a perversion of general nutrition, since this state may be in some degree predisposing. The scorbutic or rheumic diathesis may thus tend to impair the texture of the coats and laceration of the blood-vessels of the cartilage and perichondrium, when passive hemorrhages would more readily take place under undue excitement. Thus Dr. Wallace,[1] superintending physician of the Insane Asylum at New Ruppen, assumes a cachectic condition in conjunction with trauma as composing the etiological factors in othæmatoma.

Sex.—Writers are generally in accord respecting the greater frequency of othæmatoma in the male. Mr. Nicol,[2] who examined the ears of a considerable number of the inmates of the Sussex Asylum, found in 24 of them more or less deformity of the auricle, in several of them the disease being in progress. Of the 700 patients in the institution two women only were affected. Of the 249 asylum patients examined by Stiff—viz.: 124 men and 125 women—he found the cartilage of the ear more or less thickened in 17, probably the results of othæmatoma; of these 12 were males and 5 were females. In the six cases reported by Dr. Bird,[3] all of them were females.

Lennox Browne [4] examined 1,424 cases in the West Riding Asylum, 707 of whom were males, and 717 were females. He found that of the 32 patients affected 24 were males and 8 were females, making 3.39 per cent. of the males and 1.11 per cent. of the females affected—an average of 2.24 per cent. M. Foville, in alluding to this subject, says the affection occurs most frequently in males. Hun [5] reports 24 cases of the disease, 23 of them being males and one of them a female. The writer himself found in the statistics kindly furnished him by the Blackwell's and Ward's Island institutions for the insane, that among 1,309 females, 16 cases of othæmatoma were found, while in 1,269 males 14 cases were found, this inclusive of ears previously affected, as shown by deformity of the auricle, and those in progress at the time the examinations were made. This shows a percentage of 1.14 in females, and 1.10 in males. It will thus be seen that the greater number of cases occurred among females. In the opinion of some alienists female lunatics are more violent than males, and the observations of Dr. Bucke, of the Asylum at London, Canada, would seem to verify such a belief. In a recent report, in referring to the restraint required in an average population of 372 men and 394 women, he says that 25 men were restrained and secluded 4,079 hours, and 68 women 20,324 hours. The reporter offers no explanation for this, but states that on the whole females are more unmanageable than males.

Women are said to enjoy considerable immunity from the general paralysis of the insane, and consequently to escape the frequent paroxysms of excitement which characterize this phase of mental disease. On the other hand, women are subject to a monthly aggravation of symptoms during the menstrual period, since the mentally sane even are more irascible and nervous at this time.

The treatment of female lunatics, moreover, is more gentle than that of males, since their attendants are usually of their own sex, and less liable than male nurses to injure the ear in handling violent and idiotic patients. The ears of female lunatics are somewhat protected by their hair and head-dressings.

Traumatic agencies.—In the mentally sane the affection is most commonly met with among prize-fighters, gymnasts, persons given to violent sports, and among drunken and disorderly persons, where blows and falls are frequent.

As regards the insane there has existed much diversity among writers as to the cause. M. Bouteille, who does not absolutely reject the influence of predisposing causes, believes that othæmatoma never appears without violence to the auricle, and, in alluding to an epidemic of othæmatoma which occurred at Lyons in 1879, states that the trouble disappeared by simply changing attendants.[1] But it is believed that the ear is now less frequently injured by violence than formerly, since mechanical restraints are less in vogue, and an amelioration in the general management of the insane has gradually taken place. Not long ago it was not unusual for attendants to lead resisting patients by the ear, and otherwise maltreat the organ.

In some of the institutions for the insane where the writer has made inquiries concerning the prevalence of othæmatoma it would seem to be of infrequent occurrence; in one asylum a case had not been observed in "three or four years," and in respect to this matter in another institution the superintendent writes that the case books show that the "phenomenon has been regarded as a curious incident worthy of mention, but without sufficient importance in the history of the insane individual to merit description."

From a careful study of the subject the author has come to believe that othæmatoma is almost always due to violence inflicted upon the auricle. Asylum superintendents, however, have been on the whole, perhaps, rather disposed to undervalue the importance of mechanical causes, since it might be construed to imply undue restraint or rudeness in the management of their patients.

It is true that the trouble does not always supervene during paroxysms of violence, but it is difficult or impossible even to trace physical injury in all cases, or to show *per contra* that violent patients have not injured themselves. Othæmatoma is of quite common occurrence among those who give exhibitions of sparring and contuse the auricles by frequent blows with the gloved hand, and lunatics themselves injure their ears in like manner by self-inflicted blows. The extent to which this is carried by these unfortunate people, whose ears are, as a matter of fact, much less sensitive than normal, is much greater than would seem possible to any one unfamiliar with their habits. It is not uncommon for any one to strike with the fist upon a region of the body where a morbid process gives rise to slight pain, and I have seen sane persons pull and rub the auricle violently under certain conditions. The insane carry this much farther, especially when under excitement. One should not lose sight of the fact that the insane are liable to experience much discomfort in the ears from diseases of the organ, to many of which they are particularly subject, but mental disturbances from delusions and hallucinations are frequently so associated with tinnitus aurium and autophonia that the patient's attention is continually drawn to the ear. They have delusions respecting the presence of persons and things in the head, and concerning fancied attempts of "evil spirits" to gain admission thereto; they are in constant dread when awake because of the abusive and threatening language which they imagine to be spoken into the ears. Frequently the patient's voice be-

[1] Med. Zeitung, herausgegeben von dem Verein für Heilkunde in Preussen, 1844. No. 32, p. 147. Ibid., 1845, No. 45, p. 211. Obs. by Dr. Rupp.
[2] Othæmatoma, or the Asylum Ear. B. and F. Med. Chir. Rev., No. xci, July, 1870.
[3] Loc. cit.
[4] Othæmatoma, or the Insane Ear. West Riding Lunatic Asylum Reports, vol. v., p. 149. 1875.
[5] Hæmatoma Auris. A. J. I., July, 1870. Reprint.

[1] Annales Médico-Psychologiques, Juillet, 1878. Abst. A. J. O., vol. i., p. 69.]

comes autophonous, when the ears and head seem "empty" or "cavernous;" it then becomes yet more difficult for the patient to not imagine or believe that abominable and dangerous occupants have taken possession of the disordered and void dormitory of the mind. Autophonia, which is an expression intended here to embrace the various forms of tinnitus as well as autophonous vocal and respiratory sounds, gives rise to hallucinations in mentally sane subjects even, especially in the aged and feeble.

Worthy of mention in this connection is the distressing itching and burning sometimes set up in the ear in neurotic subjects, relief from which is sought by constantly pulling, pounding, rubbing, and pinching the external parts. I have known sane persons to endeavor to get some relief from the torture of pruritis of the ear by treating the organ with much violence; a lady under my care at the present time often finds herself involuntarily scratching the auricle and temple on account of "creeping sensations" in the ear, and another patient, a clergyman, has the habit of thrusting a large pin deep down into the external auditory canal to scratch the parts; he also rubs the auricle at times until it becomes intensely injected.

Lunatics often thrust objects like wool, rags, etc., into the external auditory canal to get rid of disagreeable noises in the ears and head. The organ is frequently injured in this way; I have, for example, seen a case where much damage was inflicted by thrusting the rough end of a china doll's leg into the ear, and in another instance, a large abscess was produced on the inner surface of the auricle by rubbing and contusing it with a stone. In some instances, the insane strike the head against some object with great violence, the injuries thus produced leaving the auricles abraded and scratched; others thrust their fore-fingers into the ears and furiously shake and pull the organs—in one case seen a papillary growth was developed at the entrance of the external auditory canal in consequence, and the auricles were greatly enlarged.

It will thus be seen that insane persons very frequently have a fancy that the organ of hearing constitutes the portal of the mind, and we need not wonder, therefore, that it is so frequently assailed.

Among other numerous causes may also be enumerated the violent movements of certain insane persons when in bed; their pillows, frequently consisting of materials no softer than straw or husks, are liable to injure their ears, especially during their struggles under restraint. Again, when forcibly fed, while the head is held in the strong embrace of the nurse, the ears are liable to injury. Insane paralytics, if allowed to remain too long without change in position, may suffer from an interference in the process of nutrition on account of the undue pressure upon the ear, and rude handling of the head, as often practised by attendants, may likewise injure the auricle. Sloughing of the auricle from long-continued pressure in lying upon the organ in cases of fever not unfrequently occurs in the mentally sane.[1]

Othæmatoma has been described by writers on the ear as due to bites, burns, dentition, etc. Urbantschitz[2] reports the case of a woman where both ears were believed to be thus affected by a bite of some kind, and Kipp[3] reports the case of a child, considered to be thus affected, where both auricles were injured by a burn. Cases supposed to be due to dentition are related by Frank,[4] who says, "During dentition, this condition is often observed to occur, usually in scrofulous subjects." The writer, whose experience in this disease has been considerable, has never seen othæmatoma arise from any of these causes, and it seems probable that in some of them at least phlegmonous inflammation only may have been present.

In reviewing the causes of othæmatoma, it would seem that it has no special preference for either sex or for any one form of insanity, and that it may be produced in the mentally sane by contusion of the auricle. That it depends almost exclusively upon traumatic influences in all cases seems a warrantable deduction.

Occurrence.—The more frequent occurrence of othæmatoma in the left ear has been the subject of much speculation. Stiff[1] drew attention to this preference; he found that in 17 cases the left ear was affected in 6 cases, the right ear in 4, and both ears in 7. Of the 24 cases reported by Lennox Browne, the left ear was affected in 19, the right ear in 2, and both ears in 11; when both ears were affected the left was first attacked. The experience of some observers has been the reverse of the authorities above quoted, thus Hun[2] in his 24 cases found the right ear to be the seat of the trouble in 9 cases, the left in 5, both ears in 9, and in one the history was incomplete in this regard. In the cases where both ears were affected it is not stated which side was first attacked.

The greater frequency of occurrence in the left ear does not seem to hold good in the mentally sane with the exception of pugilists, who more frequently contuse the left auricle.

Various theories have been advanced in explanation of this peculiar manifestation. Thus it has been suggested that the near position of the left carotid artery to the heart affords a more direct blood supply to the left ear, and that, furthermore, the left pinna is oftenest affected because pulling or striking the organ is more liable to be done with the right hand, the left ear receiving the injury. The left ear, it is said, is also more liable to injury than the right in forcible feeding, since in holding the patient the arm of the nurse usually presses it with more or less violence against the head.[3]

An explanation of the greater frequency of left-sided othæmatoma, however, must be sought in some other direction, since the above apply to mechanical agencies only. It seems probable that some very intransient influence must exist to cause the trouble to appear so frequently on the left side, and could this be discovered, much light would doubtlessly be thrown not only on the etiology of othæmatoma, but also on other aural diseases. It has occurred to the writer that probably some vaso-motor influence might be found to lie at the bottom of the difficulty. It is a fact that unilateral sweating about the head is not an uncommon occurrence; and, moreover, in bilateral chronic catarrh the left ear is seemingly much more rapidly invaded than the right in a notable number of instances—a condition due, in all probability, to some vaso-motor disturbance whereby the nutritive process is interfered with much more on the left than on the right side. While this agency may be found to lie in some cerebral or cerebro-spinal condition, there exists a prominent irregularity in the distribution of the sympathetic nerves which it occurs to the writer might bring about such a result. Reference is had to the peculiar arrangement of the nerves extending upward from the cardiac plexus to the two sides of the head. According to anatomists there is to be found here an important irregularity. Thus, while an unvarying connection is maintained with the right side through the superior cervical ganglion, a comparatively imperfect and varying connection exists on the *left* side—the left superior cardiac nerve and the inferior cardiac branch of the pneumogastric only occasionally affording communication between the cardiac plexus and the left superior cervical ganglion.

Of course other but less direct communications exists which bring the cardiac plexus into relationship with the left ear, nevertheless the asymmetrical distribution above described might be the means of diminishing the vaso-motor dominance, in respect to the circulation in the left ear. Granting the correctness of the hypothesis, which, however, is by no means held to be indisputable,

[1] Williams' Treatise on the Ear, p. 108. London, 1840. [2] Lehrbuch, p. 89.
[3] Trans. A. O. Soc., 1867, p. 79. [4] Ohrenkrankheiten, p. 248.

[1] Loc. cit. [2] Loc. cit.
[3] The writer's attention was drawn to this latter explanation by Dr. Craig, Assistant Surgeon New York Asylum for the Insane.

the disparity in the vascularity of the two ears would finally produce distinguishing nutritive changes in the tissues of the parts—alterations especially well marked in the tympanic membranes in *otitis medio catarrhalis chronica*, where the membrane of the *left* tympanum will frequently be found to be quite parchment-like and lustreless, while the right membrane is yet in a fairly normal condition. It is thus difficult to see why nutritive changes may not affect the cartilage of the left ear more frequently than the right, and give rise to the greater frequency of othæmatoma on the left side.

Othæmatoma is frequently bilateral, very often developing equally on both sides. It may develop rapidly and disappear again as rapidly as it came. This bilateral invasion is suggestive of centric nervous origin.

Othæmatoma has been observed to occur during pregnancy. Gruber alludes to a case which came to his clinic in the fourth month of pregnancy.

YELLOW FEVER ON THE UNITED STATES STEAMSHIP PORTSMOUTH.[1]

By A. M. MOORE, M.D.,

SURGEON U. S. NAVY.

Endemic influence.—The only morbid influence of this nature that came under my observation was that of intermittent and remittent fevers at St. Thomas, W. I. These diseases prevail here every year, and all the year round. According to the statistical report of Dr. Magens, King's Physician, for the year 1883, there were 742 classified under this head, out of a total number of diseases of all kinds of 1,793—population estimated at 15,000. That they were light, however, is shown by the fact that there were only 4 deaths out of this number, the total number of deaths from all causes for this period being 415. The period of their greatest activity is that which covers the months of October, November, and December, the so-called rainy season. This term, it is obvious, is merely relative, as abundance of rain falls at all seasons; the mean annual amount being 46.8 inches. This "influence" was felt on board ship in the form of mild intermittents, two or three cases of which were under daily treatment during a twelve-days' sojournment of the ship at that place, but which promptly disappeared upon our departure. It is an interesting fact that the conditions under which these fevers exist here are not such as are generally conceded to be required for the production of *malarial* diseases. These conditions are best indicated by the names which have been applied to the whole class—"paludal," "swamp," and "marsh" fevers. Now, this island is a mass of trappean rock, devoid of vegetation except some species of cactus and a few small and hardy shrubs, and trees that can scarcely be dignified with the name. There is an entire absence of stagnant water, or even of fresh-water springs and streams, the rain which falls running rapidly down the mountain side into the sea. Again, malaria is rural, and not urban; it selects as its favorite habitation the fresh-water fens of the interior, and shuns salt water. But malarial fevers are *endemic* here, where the conditions are of a nature to lead one to expect to find, rather, yellow fever! Does not this circumstance suggest the possibility of interconvertibility under certain favorable influences? As a matter of fact, when an unacclimated person indiscreetly exposes himself to the miasmatic emanations here, he may possibly be stricken with *yellow fever*.

Report of three cases of yellow fever.—In order to complete and illustrate the remark under the head of "Endemic Influence," the anachronism is committed of reporting with the first quarter some cases of the above-named disease which occurred during the second. It is believed that this incongruity in time is justified by the increased value, if there be any, which will be thus obtained by placing in juxtaposition reports so closely related that one might be taken as a sequence of the other. Whatever may be the degree of relationship between malarial fevers and yellow fever, the fact is potent that, at a time when, according to the reiterated assurances of the American consul and king's physician, St. Thomas was, and had been for four years, entirely free from the last-mentioned disease, this disease was propagated from thence to persons on board this vessel. Such being the case, it becomes a serious question whether it is ever judicious, from a sanitary point of view, to send ships of this kind, with a crew composed largely of boys, who might become easily demoralized, to this port. In this connection it may be proper to state that every precaution was taken at this place to preserve the health of the ship's company short of absolute deprivation of liberty, which, indeed, was restricted to four hours during daylight. In view of the best information obtainable as to its good sanitary condition, this limited liberty was not considered injudicious. It is proper also to observe that at the military hospital visited there was no case that resembled in the remotest degree yellow fever. In addition to the three cases reported, there was another of a suspicious nature, which appeared on the 14th, and which was isolated with the rest, but as the subject of it, a marine, had not been ashore in St. Thomas, it is not included in the report.

CASE I.—The ship sailed from St. Thomas, bound for Hampton Roads, Va., early on the morning of April 5th, and, as before stated, the few cases of febriculæ disappeared very soon thereafter. About 3.30 P.M. of the 9th, four days out, Commander W. C. W——, who was last on shore for about four hours on the afternoon of the 4th, was taken sick—his illness being initiated by rigors, followed in about an hour by headache and fever. Temperature at 7 P.M., 103.5°; pulse, 90. Was put to bed, and 0.7 grm. quinia administered.

April 10th.—Temperature at 8 A.M., 101°; pulse, 90; at 7 P.M.: temperature, 102.2°; pulse, 72; vomited copiously in the morning a dark liquid, about the color of weak coffee, repeated in smaller quantity twice during the afternoon; vessels of conjunctivæ deeply injected; frontal headache and dizziness; pain in back, "as if it would break in two;" skin of forehead hot to the touch; face flushed; no epigastric pain or tenderness; marked hebetude; complete anorexia; specific gravity of urine 1032, scanty, dark colored, acid, with no trace of albumen.

April 11th.—Temperature at 8 A.M., 102.2°; pulse, 72; at 7 P.M.: temperature, 102.9°; pulse, 72; *urine albuminous;* vomiting of yellowish-white matter at intervals; is heavy, and sleeps much.

April 12th.—Temperature at 8 A.M., 101°; pulse, 55; at 7 P.M.: temperature, 100.9°; pulse, 47, weak and compressible; specific gravity of urine 1026, albuminous and scanty; continues to vomit at intervals small quantity of whitish matter; no recurrence of "black vomit" since second day.

April 13th.—Temperature at 8 A.M., 98.4°; pulse, 54; at 7 P.M.: temperature, 99.2°; pulse, 56; specific gravity of urine, 1024, highly albuminous; several copious and spontaneous dejections of dark green matter; heat of surface and headache less intense; ferrety appearance of eyes disappearing.

April 14th.—Temperature at 8 A.M., 99°; pulse, 56; at 7 P.M.: temperature, 99°; pulse, 58; urine albuminous, acid, specific gravity, 1026; headache and lumbar pain gone.

April 15th.—Temperature at 8 A.M., 98.5°; pulse, 60; at 7 P.M.: temperature, 99°; pulse, 60; urine highly albuminous, acid, specific gravity 1023, quantity increasing; great languor.

April 16th.—Temperature at 8 A.M., 99°; pulse, 58 and weak; at 7 P.M.: temperature, 98.5°; pulse, 50; albumen continues in undiminished quantity in urine; conjunctivæ jaundiced.

[1] From the report of sick for the first quarter, 1884

April 17th.—Temperature, normal; pulse, 54; urine albuminous; amount voided during last twenty-four hours 360 c.c. (12 oz.), being the largest daily quantity during the illness; specific gravity 1024; tinct. iodinii shows grass-green reaction of biliverdine. (This reagent was preferred to nitric acid, on account of the confusion of color produced by the latter on precipitated albumen. Pettenkoter's test failed to reveal the presence of the biliary substances proper, although great care was taken in its application—a specimen of urine being evaporated to dryness, the solid residue redissolved in alcohol, and a precipitate obtained by addition of ether, which was redissolved in distilled water, to which the test was applied. The failure to obtain any evidence of their presence may have been due, however, to lack of skill in manipulation.) Skin and conjunctivæ profusely jaundiced.

April 18th.—Temperature at 8 A.M., 97.4°; pulse, 47, with more volume; at 7 P.M.: temperature, 98°; pulse, 54; albumen decreasing in urine, specific gravity 1025; amount voided during twenty-four hours, 620 c.c.—marked increase.

April 19th.—Temperature at 8 A.M., 97°; pulse, 47; at 7 P.M.: temperature, 96.6°; pulse, 48; quantity of urine, 610 c.c.; specific gravity 1020, albumen decreasing in quantity; skin and eyes remain deeply jaundiced.

April 20th.—Temperature at 8 A.M., 97.2°; pulse, 54; at 7 P.M.: temperature, 98°; pulse, 48; amount of urine voided during past twenty-four hours, 720 c.c.; specific gravity 1024, *albumen entirely* disappeared.

April 24th.—Since last entry patient has improved greatly, and now sits up the greater part of the day; like Oliver Twist, he "wants more" to eat, and his diet is being cautiously increased daily. The yellow tint of skin and eyes, though still quite manifest, is daily passing away.

Case II.—On the morning of April 12th, Justin P. Q——, bugler, a native of France, aged about forty-two years, reported sick, with a temperature in axilla of 100.2°, violent headache with dizziness, face flushed, eyes bright and deeply congested, lower eyelids dark and swollen, as if by effusion of disintegrated blood into subcutaneous cellular tissue, heat of skin marked; tongue coated and is protruded with a tremulous motion; there is complete anorexia, though no pain or tenderness of epigastrium or back is apparent. States that he has been feverish, with headache, for last two days, which makes the commencement of his illness the 10th. Was ashore in St. Thomas from morning of March 29th till afternoon of next day, when he returned aboard "drunk and dirty."

April 13th.—Temperature, 101°; pulse, 90; urine straw-colored, scanty, acid, and free from albumen; headache and congestion of face and conjunctivæ continue; eyes closed by swelling of lids, which have a tendency to agglutination; facial aspect repulsive; odor of breath musty and highly offensive; anorexia continues, though no pain or irritability of stomach is complained of.

April 14th.—Temperature at 8 A.M., 101°; pulse, 96; at 7 P.M.: temperature, 101.8°; pulse, 98; urine acid, specific gravity 1028, no albumen; face and eyelids continue swollen and eyes congested; headache diminished; complete anorexia, but no nausea or gastric disturbance; gums spongy and bleeding.

April 15th.—Temperature at 8 A.M., 100°; pulse, 78; at 7 P.M.: temperature, 101.2°; pulse, 78; urine free from albumen; swelling of face and eyelids subsiding; headache giving way to soreness of scalp.

April 16th.—Temperature at 8 A.M., 99.4°; pulse, 74; at 7 P.M.: temperature, 100.4°; pulse, 78; urine free from albumen; facial aspect improving; head better.

April 17th.—Temperature at 8 A.M., 98.8°; pulse, 74; at 7 P.M.: temperature, 99.8°; pulse, 80; no albumen in urine; eyes much clearer; swelling of lids subsided.

April 18th.—Temperature, normal; pulse, 72; *urine albuminous*, straw-colored, acid; reports himself as feeling better.

April 19th.—Temperature, normal; pulse, 72; albumen in urine increasing in quantity; no pain or sense of discomfort in epigastrium or back; free alvine dejections of dark green matter—conjunctivæ jaundiced.

April 20th.—Temperature normal, urine albuminous, eyes jaundiced.

April 21st.—Temperature normal, urine continues albuminous; progressing favorably.

April 22d.—Temperature normal, albumen decreasing in quantity; skin and conjunctivæ clearing up.

April 23d.—Temperature normal; *albumen disappeared* from urine. From this time is dated the commencement of convalescence. There is no pain, and patient complains of nothing but unsatisfied hunger.

Case III.—George D. F——, third cabin boy, native of England, eighteen years and four months of age, reported on forenoon of April 13th, with following symptoms, viz.: intense frontal headache, giddiness, and mental confusion; eyes bright and conjunctivæ deeply congested; face flushed; racking pain in shoulder and knee joints; anorexia, but no nausea or epigastric pain or tenderness, and no lumbar pain; temperature, 99.2°; pulse, 100; states that he has suffered from headache and articular pains for two days, hence the accession of the disease is fixed at the 11th inst. Patient was ashore in St. Thomas from 1 to 8.30 P.M. on March 29th, the last two hours of which he spent sitting on the wharf, where, it is to be presumed, miasmatic emanations are the most virulent.

April 14th.—Temperature at 8 A.M., 100.2°; pulse, 96; at 7 P.M.: temperature, 102.8°; pulse, 100; tongue (dry and bare last night), moist; urine acid, specific gravity 1026, non-albuminous; articular pains better, otherwise much the same as yesterday.

April 15th.—Temperature at 8 A.M., 99°; pulse, 78; at 7 P.M.: temperature, 100.4°; head symptoms, as well as articular trouble, much better; no appearance of albumen.

April 16th.—Temperature, 99°; pulse, 76; head symptoms and articular pains entirely disappeared; anorexia persistent; eyes still congested; no albumen.

April 17th.—Temperature at 8 A.M., 99.8°; pulse, 80; at 7 P.M.: temperature, 98.5°; pulse, 78; conjunctivæ congested; urine acid, straw-colored, transparent, and non-albuminous; no pain or tenderness of epigastrium.

April 18th.—Temperature at 8 A.M., 99°; pulse, 78; at 7 P.M.: temperature, 100.2°; pulse, 78; character of urine unchanged; eyes remain congested; slight frontal headache; gums spongy and bleeding; lips dry and encrusted.

April 19th.—Temperature at 8 A.M., 98.6°; pulse, 76; at 7 P.M.: temperature, 98.4°; pulse, 60; no indication of albumen in urine; sponginess and bleeding of gums slightly improved.

April 20th.—Temperature at 8 A.M., 97.8°; pulse, 60; at 7 P.M.: temperature, 99°; pulse, 72; no albumen; injection of vessels of conjunctivæ fading; opened yesterday a large abscess over left parotid region.

April 21st.—Temperature at 8 A.M., 98°; pulse, 56; at 7 P.M.: temperature, 97.6°; pulse, 60; conjunctivæ less congested; *trace of albumen in urine.*

April 22d.—Temperature at 8 A.M., 97.2°; pulse, 54; at 7 P.M.: temperature, 98°; pulse, 48; urine more markedly albuminous; conjunctivæ jaundiced.

April 23d.—Temperature at 8 A. M., 97.4°; pulse, 48; at 7 P.M.: temperature, 98.2°; pulse, 60; albumen disappearing from urine, which is increasing in quantity; opened a small abscess in outer edge of nasal septum—left side. Doing well.

April 24th.—Temperature normal; urine abundant and albumen disappeared; patient is pronounced convalescent—the chief symptom being hunger.

The principles involved in the treatment of these cases consisted in rest of the stomach, and of measures adapted to relieve renal congestion and to increase the excretion and elimination of urine. In the case of Captain W——,

the type of the disease was different from that of Q—— and F——. In the former, gastric symptoms predominated and were quite serious for the first three or four days, while in the two latter the head symptoms were the most important and the cases approached more nearly the sthenic type. It will be observed that in these last cases the stomach was not at any time noticeably involved in the train of morbid symptoms, and it was only at a very late date that albumen made its appearance in the urine. In the case of Q——, the first indication of its presence was on the eighth day of the disease, and it had ceased to appear on the thirteenth; with F—— it was observed first on the tenth, and had entirely disappeared on the thirteenth day; while in Captain W——'s case it was found on the third day. and it was not until the eleventh that reagents failed to reveal its presence. Again, Captain W—— was profoundly jaundiced, while the other two were not at all markedly so.[1] Hence, while the principles of treatment were the same in all, these differences in type and symptoms made it necessary to vary the details. For example, the tincture of digitalis, which was used early with Q—— and F—— as a diuretic, could not be tolerated by Captain W—— until about the fifth day of the disease, on account of excessive gastric irritability. In all, revulsives were applied over the epigastrium and renal region, from the inception of the disease till the disappearance of albumen from the urine. The agents used for this purpose, and found effective, were sinapisms and tincture of iodine. Nothing whatever in the way of diet was permitted until the fifth day of the disease, when the blandest articles, as wine jelly, arrow-root, etc., were allowed, and the dietary cautiously varied and increased from that time. From about the eighth day, milk punch was, with appreciably good results, added to the other allowance. After albumen ceased to appear in urine, a tonic of quinia, iron, and acid. sulph. was substituted for the digitalis.[2] Captain W—— was, of course, treated in the cabin, access to which was prohibited to all except the surgeon and nurse (a man who had had the disease, detailed for that purpose). The other cases were isolated in the sick-bay, no one being allowed to enter there besides the surgeon, apothecary, and bay-man. This place was selected for the purpose because, first, there was no better; second, their isolation could be accomplished here with the least danger of attracting attention and arousing suspicion, a thing which it was obviously desirable to avoid. The atmosphere of the sick-bay was disinfected daily by diffusion of a saturated solution of carbolic acid by means of the steam atomizer.

The first case, Captain W——, occurred in latitude 25.08° N., with a temperature of 73° F.; the last, F——, in latitude 27.10° N., with a temperature of 76° F.

The favorable progress of these cases is largely due to the fact of their not appearing until the ship was well on the way to the north, and to getting soon into cooler weather. To the same cause the ship's company are undoubtedly indebted for their immunity from further attack. At noon of the 13th the ship had reached a temperature of 65° F., and from that time there was a steady decline till a temperature of about 42° was attained, about April 23d.

For the first few days after the first case announced itself, the situation, with two hundred and sixty-five human beings, mostly boys, enclosed in the narrow confines of a ship, in a tropical climate, and dependent upon the light and capricious winds of the "horse latitudes," was anything but reassuring. It was thought best by the surgeon and executive officer to conceal from every one the existence of the disease in the ship. But with these two the anxiety, while the ship lingered in the region of high temperature, was intense, lest each day might witness the accession of other cases to the sick list, and with the dire consequences of an epidemic on the *morale* of a crew of this kind staring them in the face. Then, as suspicion began to be aroused, with its resulting depression, the task of wearing a cheerful mien, with an apprehensive mind, was, indeed, a difficult one to successfully assume.[1]

[1] In all the cases there was noticed for the first few days a musty and peculiarly offensive odor of the breath, possibly due to carbonate of ammonium, from decomposition of retained urea.

[2] In the beginning the contents of the bowels were removed by an enema of soap, magnesiæ sulph., 30.00 grm., and water.

[1] The period of latency in the case of Captain W—— appears to have been about five days, though, as he was ashore two or three times prior to the 4th, it is uncertain. With Q—— and F—— it was eleven or twelve, and thirteen days, respectively.

Progress of Medical Science.

Laryngitis Hemorrhagica.—Dr. Stepanoff regards this affection as a distinct form of laryngeal inflammation, arising from the same causes as the catarrhal form, yet affecting females only. The primary symptoms are those of ordinary laryngitis, but after from three to fourteen days, hemorrhage occurs. It is sometimes excited by coughing, but may also come on without any noticeable cough. The amount of blood may vary from half an ounce to four ounces. There may be one or several attacks of hemorrhage, and after they have ceased, the symptoms of catarrhal laryngitis remain for a longer time than in the common form. Suffocative attacks occur but seldom. The laryngoscopic picture differs from that of the ordinary variety only in the presence of blood-clots. The intensity of the catarrhal inflammation stands in no relation to the amount of hemorrhage. Blood comes only from the true vocal cords and seems to occur by diapedesis, since it is readily controlled by a small injection of nitrate of silver.—*St. Petersburger Medicinische Wochenschrift*, April 26, 1884.

An Artificial Sponge.—Dr. Sampson Gamgee describes in *The Lancet* of May 3, 1884, a sponge devised by him, which combines absorbing power with elasticity, and is cheap enough to be burnt after use, thus rendering sponge infection impossible. It consists of an inner ball of absorbent cotton, surrounded with a wad of cocoanut fibres, around which again is a layer of absorbent cotton, the whole being enclosed in a gauze envelope. He found that a ball so made takes up readily from sixteen to eighteen times its own weight of blood or water, which when squeezed out still leaves the ball elastic and absorbent. The sponge may be rendered antiseptic by means of a very brittle ball or capsule, containing any antiseptic desired, and enclosed within the inner nucleus of cotton. By giving the sponge a preliminary squeeze, the capsule is broken and the antiseptic fluid set free.

A New Remedy for Phthisis.—Aluminium and its compounds are affirmed by Dr. Pick to constitute a most effective remedy against pulmonary tuberculosis, this opinion being based on experiments upon rabbits as well as on clinical observations. In one case, where infiltration of the apices of the lungs had occurred, removal of the lesion and all the morbid symptoms is said to have followed the administration of aluminium in the following form: Metallic aluminium, eight grammes; aluminium hydrate, five grammes; calcium carbonate, five grammes; gum tragacanth, in sufficient quantity; divided into sixty pills, one pill being taken three times a day.—*The Lancet*, May 3, 1884.

Diabetic Coma.—A case is related in *The Lancet* of a young woman who, except from an occasional headache, seemed to be in good health. She was found sitting in a chair, apparently in a profound sleep, from which, however, she could not be roused, except that she would raise her hand to her head when spoken to loudly. All attempts at resuscitation were in vain, the coma gradually deepened, and the girl died. There was no vomiting. At the autopsy no organic disease of any of the organs could be discovered, but the tissues gave forth a strong diabetic odor, and examination of the urine showed the presence of sugar in considerable quantity.

Carbolic Acid in Muscular Rheumatism.—Dr. Hurz recommends the employment of carbolic acid in intra-muscular injections for the relief of pain in muscular rheumatism. He uses a solution of 1–100 or 1–50. The injections are not painful, causing at the most but a slight burning sensation. The analgesic effect is manifested within fifteen or twenty minutes.—*L'Union Médicale du Canada*, May, 1884.

Mammary Atrophy.—Dr. J. W. Reynolds writes to *The Lancet* concerning a patient of his who is now in her fiftieth year. She ceased to menstruate about three or four years ago, and has borne six children. After weaning her first child, which she nursed for a few weeks only, she being twenty-one, her mammæ completely disappeared; not a vestige of gland could be felt, and there was no loose skin, but the chest and abdomen were as smooth as those of a child; but when she became pregnant the mammary glands enlarged to a very fair size, and there was an abundant supply of milk—too profuse, in fact, for it ran away continuously; and as it weakened her and did not nourish the child, she had to discontinue nursing. Then the glands would gradually disappear, the skin contract, and everything become smooth again. So with every pregnancy. Now, at fifty, her chest and abdomen are as smooth as any young girl's—no loose folds of skin or rugæ.

Cider as a Prophylactic of Stone in the Bladder.—Dr. Denis Dumont has examined the statistics of the Caen Hospital, and found that in fifty-nine years only four cases of stone in the bladder were admitted. In one the nucleus was a foreign body; and in two the patients drank wine, and not cider, which is the ordinary beverage in Normandy. An inquiry made in the neighboring departments of the Manche and Orne, showed that stone in the bladder was extremely rare where the use of cider was the rule. Meat being cheap and abundant in Normandy, the rarity of stone cannot be ascribed to the use of a food containing less nitrogenous substances than in other countries. The remarkable diuretic properties of cider, which the author has found useful in gravel, obesity, and some forms of gastritis, are considered to afford an explanation of this remarkable freedom from calculus.—*Birmingham Medical Review*, May, 1884.

The Prevention of Blindness in Infancy.—The following instructions, based upon the directions of the Society for the Prevention of Blindness, have been issued by the Manchester and Salford Sanitary Association, for the information of mothers and nurses (*Practitioner*, May, 1884): "One of the most frequent causes of blindness is the inflammation of the eyes of new-born babies. Yet this is a disease which can be entirely prevented by cleanliness, and always cured if taken in time. The essential precautions against the disease are: 1. Immediately after the birth of the baby, and before anything else is done, wipe the eyelids and all parts surrounding the eyes with a soft dry linen rag; soon afterward wash these parts with tepid water before any other part is touched. 2. Avoid exposing the baby to cold air; do not take it into the open air in cold weather; dress the infant warmly, and cover its head, because cold is also one of the causes of this eye disease. When the disease appears it is easily and at once recognized by the redness, swelling, and heat of the eyelids, and by the discharge of yellowish white matter from the eye. *Immediately* on the appearance of these signs *seek the advice of a medical man;* but in the meantime proceed at once to keep the eyes as clean as possible by very frequently cleansing away the discharge. *It is the discharge which does the mischief.* The cleansing of the eye is best done in this way: 1. Separate the eyelids with the finger and thumb, and wash out the matter by allowing a gentle stream of lukewarm water to run between them from a piece of rag or cotton-wool held two or three inches above the eyes. 2. Then move the eyelids up and down and from side to side in a gentle, rubbing way, to bring out the matter from below them; then wipe it or wash it off in the same manner. This cleansing will take three or four minutes, and it is to be repeated regularly *every half hour* at first, and later, if there is less discharge, every hour. 3. The saving of the sight depends entirely on the greatest care and attention to cleanliness. Small pieces of clean rag are better than a sponge, as each rag is to be used once only and then burnt immediately; sponges should never be used, except they are burnt after each washing. 4. A little *washed* lard should be smeared along the edges of the eyelids occasionally to prevent them from sticking. Special warning: Of all the mistaken practices which ignorance is apt to resort to, none is more ruinous than the use of poultices. Let them be dreaded and shunned as the destroyers of a newborn baby's sight. Tea-leaves and sugar of lead lotion are equally conducive to terrible mischief, stopping the way as they do to the only right and proper course to be taken."

Brittle Bones.—A case was recently reported to the Suffolk Medical Society, by Dr. Douglas Graham, of a patient who had sustained eighteen fractures during the first eighteen years of his life. They were distributed as follows: The right arm, broken nine times; left arm, twice; left leg, three times; right leg, twice; right and left clavicle, once each. The patient's father broke his bones fourteen times, and the father's cousin twenty-one times. The father's uncle was also a bone-breaker.—*Boston Medical and Surgical Journal*, May 15, 1884.

Increase in the Length of the Leg following Rheumatism.—Dr. Vinals reported to the Medico-Chirurgical Academy of Spain, the case of a young man in whom an increase of two inches in the length of the leg was observed to follow upon an attack of rheumatism in the knee. The reporter thought it due to increased activity excited in the still growing epiphyses by the articular inflammation. The inequality was not permanent, as the affected limb was in time overtaken in growth by its fellow.—*Revista de Medicina y Cirugía Prácticas*, April 22, 1884.

Spiræa Ulmaria in Enlarged Prostate.— According to Bauch, the queen of the meadows (*spiræa ulmaria*) is destined to occupy an important place in the therapeutics of diseases of the genito-urinary apparatus. He has administered an infusion of this plant to patients with enlarged prostate in whom urination or the passing of a catheter was very difficult, and within half an hour they urinated abundantly and freely. The queen of the meadows is diuretic, astringent, and antispasmodic, and exerts a special action on the sphincter of the bladder, spasm in which it relaxes.—*Revista de Medicina y Cirugía Prácticas*, April 22, 1884.

Treatment of Scrofulous Adenopathies.—Dr. García Andradas claims to have obtained excellent results in the treatment of sloughing scrofulous glands with the solution of the perchloride of iron (*El Dictamen*, April 30, 1884). He paints the surface of the caseous mass with the solution, and states that the slough is soon cast off, leaving a healthy granulating surface. This readily heals under an ointment of turpentine and vaseline, one part to fifteen. Of course the constitutional treatment is not to be neglected.

Physiological Albuminuria.—At a recent meeting of the Société de Médecine of Paris, M. Coignard reviewed and criticised the theories concerning albuminuria, and also the thesis on this subject written under the direction of Professor Bouchard. According to his personal observations, and those of a number of cases collected by Keller, physiological albuminuria does not exist. M. Coignard admitted the existence of transitory albuminuria, as also of transitory glycosuria, but denied that albumen is ever found in the urine of perfectly healthy individuals.—*British Medical Journal*, May 24, 1884.

THE CAUSE OF CHOLERA.—Mr. Vincent Richards has been conducting some experiments on pigs in regard to the cause of cholera, which have led him to very different conclusions from those of Koch (*Indian Medical Gazette*). He states that the choleraic discharges contain a virulent poison, which, however, disappears within a few hours, when decomposition has begun. He supposes the poison to be a chemical compound, and not a micro-organism, since he has found that it is destroyed by potassium permanganate. If the evacuations are rapidly desiccated without decomposition, the poison may retain its virulence for a considerable length of time and in this way be transported by fomites. He believes that the poison acts by paralyzing respiration.

THE SIGNIFICANCE OF THE PATELLAR TENDON REFLEX IN GENERAL PARESIS OF THE INSANE.—The following are the conclusions of a paper on this subject by Professor L. Bianchi in *Il Movimento* of May 15, 1884: 1. Exaggeration of the patellar tendon reflex may be a valuable diagnostic sign in the beginning of the disease, especially in those cases in which the *délire de grandesse* is not accompanied by disturbances of speech. 2. Although at the commencement of the disease it is as a rule exaggerated, it may in the further progress of the malady undergo certain changes. More often it diminishes or disappears, rarely becomes more exaggerated than before. 3. By itself, whether exaggerated or abolished, it does not indicate a determinate anatomical lesion of any special region of the cord occurring as a complication of general paresis. Therefore, instead of being considered as the expression of certain recent morbid processes, it should be studied in connection with the other symptoms of the disease, and not by itself or at any special period in the course of the malady.

MORPHINISM AND PREGNANCY.—Dr. Feré relates the case of a young woman addicted to the use of morphine in rather moderate quantity (about 3½ grains a day), who, when in the sixth month of pregnancy, endeavored to break off the habit. But any sudden diminution in the daily amount taken caused such severe uterine colic that the progress toward recovery was very slow. At the time of delivery she was taking about two grains per diem, and no attempt to reduce this quantity was made for a week. It was then sought to lengthen the intervals between the hypodermic injections, but the uterine pains returned and the lochial discharge ceased and did not reappear until the injections were resumed. At the end of a month the daily quantity of morphine had been reduced to a little more than one grain, and it was then withheld entirely. The patient suffered severely from uterine and intestinal colic and was unable to sleep the first night, but the following day all these unpleasant symptoms ceased, and she was definitely cured. The effect of the sudden abstinence upon the child, when birth removed him from the influence of the drug, was evident. He was a well-developed boy, though emaciated. He suffered from convulsive twitchings with continuous agitation and crying for sixty hours, during which time he did not sleep a minute. After that he recovered, slept well, and acted naturally. This fact would seem to indicate that, whatever may be said to the contrary, the fœtus is influenced by morphine even in relatively small doses, and that it may suffer from the sudden abstinence enforced by birth. This last consideration indicates the necessity of a gradual withdrawal of the drug in the case of opium-eaters who become pregnant. —*Il Movimento*, May 15, 1884.

DIAGNOSIS OF PLEURITIC EXUDATIONS BY THE TUNING-FORK.—The following are Dr. Federico's conclusions relative to the utility of the tuning-fork in the diagnosis of pleuritic effusions and exudations (*Gazzetta Medica di Roma*, May 1, 1884): 1. If the vibrating tuning-fork be applied to any part of a normal thorax, a full, distinct, and augmented sound results. 2. When made to vibrate while in contact with thoracic parietes within which there exists an effusion, and particularly if placed over that portion of the chest where the dulness on percussion is most marked, the tuning-fork emits a short, obscure, and muffled tone. 3. The sound is shorter and more muffled in proportion as the fluid is more abundant. 4. Although the author has, thus far, only experimented with serous effusions, he inclines to the belief that the sonorous vibrations of the instrument would be still more weakened and obscured if the effusion were rich in corpuscular elements. This theory derives support from the fact, experimentally demonstrated by the author, that the vibrations of a tuning-fork immersed in a watery fluid contained in a thin vessel are communicated to the receptacle, while the vibrations cease to be perceptible when the serous fluid is replaced by a purulent one. The author recommends the adoption of the following precautions in the application of the tuning-fork to its proposed diagnostic use: 1. The instrument should be placed in contact with corresponding parts of both the normal and diseased half of the thorax, for purposes of comparison. 2. An instrument with long branches facilitates the perception of slight variations in pitch and quality. 3. The vibrations imparted to the tuning-fork should be of moderate intensity lest they be transmitted to the stomach and colon and be thereby unduly augmented. 4. A certain amount of force should be employed in holding the instrument in contact with the chest-wall, as the vibrations are not well transmitted if this precaution be omitted.

ORIGIN OF MUSICAL DIASTOLIC AORTIC MURMURS.—Dr. Groedel, of Nanheim, reaches the following conclusions regarding diastolic aortic murmurs (*Berliner Klinische Wochenschrift*, April 21, 1884): The murmurs in question, often perceptible at considerable distance from the seat of their production, are caused by insufficiency of the aortic semilunar valves, if the valves are in such a condition that they may be put in regular and equal vibration, during the entire diastole, by the regurgitant blood current. The above condition obtains, first, when the first portion of the aortic arch is dilated and relative insufficiency of the valves is thus produced; and, secondly, in cases of genuine insufficiency, provided the valves be still capable of vibrating regularly and evenly.

A SUBSTITUTE FOR THE COLD BATH IN FEVERS.—Professor Preyer, of Jena, publishes in the *Berliner Klinische Wochenschrift*, May 5, 1884, an extract from a paper read by himself, at a meeting of the Jena Medical and Natural History Society, on a novel method of reducing animal temperature. The experiments upon which Professor Preyer's suggestions relative to the production of antipyresis are based were performed upon Guinea-pigs, but seem to show that the new method may be equally applicable to man. The means of refrigeration employed was the water spray. When the temperature of the water used was between 40° and 45° F., the rectal temperature of the animals, was reduced about 2° within from five to ten minutes. If, after the discontinuance of the spray, the minute particles of water entangled in the hair be allowed to slowly evaporate, the temperature continues gradually to diminish for several hours. If water at the temperature of 70° F. be employed the refrigeration is manifested within twenty minutes, but is not so pronounced. The rapidity and the degree of the antipyretic effect may thus be easily regulated by modifications in the temperature of the water used, and of the interval during which the spray is applied. The author states that the object of this communication is to incite to farther experimentation on animals as well as on the human subject.

ANTISEPTIC PROPERTIES OF BICHROMATE OF POTASSIUM.—Some experiments recently conducted in France show that urine, blood, milk, and other substances can be preserved from putrefaction during several months by the addition of one per cent. of their weight of this salt. —*Cincinnati Lancet and Clinic*, May 10, 1884.

Phlebitis Complicating Rheumatism.—M. Schmitt establishes two varieties of phlebitis accompanying acute articular rheumatism. One form of the disease manifests itself at the height of the rheumatic attack and augments the local pains and the temperature, while the joints become less tense and swollen. The phlebitis usually develops at the point of junction of the deep and superficial veins. Sometimes the veins remain permeable, the symptoms being confined to slight œdema, slight redness along the course of the vessels, and moderate pain. More frequently, however, this form of phlebitis produces obliteration of the veins, with more pronounced œdema, a cord-like induration, and, possibly, with petechiæ, ulcerations, and even pulmonary embolism. The second variety of phlebitis appears at the termination of the rheumatic attack, rapidly producing occlusion of the vessel, with more œdema, and with pain of considerable intensity. The phlebitis persists for several weeks, occasioning difficulty in walking and in moving the limbs. The femoral, popliteal, and saphenous veins are most frequently affected, but the radical and brachial are sometimes involved.—*Archives Médicales Belges*, April, 1884.

Concealment of the Cicatrix after Removal of Mammary Tumors.—M. D. Mollière describes an operation, devised by himself, for the purpose of hiding the cicatrix resulting from the ablation of an adenoma of the breast, located in the lower part of the gland. The tumor was about the size of an egg, and became regularly tumefied during the week preceding menstruation, resuming its former dimensions after the cessation of the monthly flow. The operation was performed as follows: A transverse incision having been made in the course of the submammary fold, the cellular tissue behind the mamma was separated from the glandular tissue, the encapsulated adenoma easily enucleated, and a drainage tube inserted. Union occurred by first intention, and the small linear cicatrix, being situated at the bottom of the submammary cutaneous fold, was completely hidden by the gland in its natural dependent position.—*Archives Médicales Belges*, April, 1884.

Nervous Diarrhœas.—Professor H. Nothnagel formulates the following conclusions regarding diarrhœas of purely neuropathic origin: Nervous diarrhœas, first so designated by Trousseau, are those which occur as the result of anxiety, fright, or various other intense physical impressions, and occasionally in hysteria, but which are unattended by intestinal inflammation. The diarrhœas in question may be chronic as well as acute. In certain individuals the above-mentioned etiological agencies merely occasion abnormal frequency of the alvine dejections. In other cases depressing mental impressions may cause a purely nervous diarrhœa to be engrafted upon a chronic enteritis, and to notably prolong the duration of the latter. The author cites cases illustrative of this disease, which, in his opinion, justify the establishment of two varieties of nervous diarrhœas. In one category belong cases in which the evacuations are of fluid consistency, in the other those attended by formed or hardened dejections. In the latter form the author believes that the nervous influence resulting in increased frequency of defecation is exerted upon the lowest portion of the large intestine in which fecal matter is already accumulated. In this case the only abnormal feature of the process is the occurrence of evacuations at unusually frequent intervals. A different nervous mechanism must be invoked to explain the occurrence of the fluid evacuations. The author assumes, in these cases, that either the entire bowel is affected by violent peristaltic movements, which mingle the fluid constituents of the discharges emanating from the small intestine with the solid fecal matter of the colon, or that an abundant transudation of serum, occurring in the large intestine itself, liquefies the solid matter previously accumulated therein. Professor Nothnagel inclines in favor of the latter theory, although unable to furnish convincing proofs of its accuracy. The exciting influences resulting in these two forms of diarrhœa must produce their effect through different nervous channels. In one case those nerves which, under stimulation, occasion increased peristalsis are incited to functional activity, in the other the vaso-motor and secretory nerves are chiefly instrumental in producing the diarrhœa.—*Allgemeine Medicinische Central-Zeitung*, May 14, 1884.

The Differential Diagnosis of Syphilitic Neuralgia.—Dr. Diffre (*Gazzetta Medica di Roma*, May 1, 1884) expresses the belief that the symptomatology of syphilitic neuralgia furnishes the most useful data for its differentiation from other forms of the disease. The clinical history and the results of treatment may also furnish considerable assistance. The author asserts that the pain of syphilitic neuralgia is intermittent, and that it manifests spontaneous exacerbations. If excited by mechanical means its intensity is diminished. The intensity of the spontaneous variety may vary from the lowest grades to such degrees of pain as might be produced by strong electric currents or the actual cautery. The pain extends along the course of the nerves, and is frequently limited to small areas. The neuralgic attacks are less frequent during the day, and even when observed at that time are of much less intensity than when occurring at night.

Reflex Paralysis.—A woman, thirty-four years of age, multipara, was admitted to hospital in the service of Dr. Gomez Torres, suffering from paralysis and atrophy of the upper extremities. Some months previous to her admission she had noticed that her hands were becoming thin and that she was gradually losing all power in them. The paralysis and atrophy increased in spite of persistent electrical and other treatment, until at this time she was unable to extend the hands at all, and the thenar eminences had entirely disappeared. Examination showed that she was suffering also from chronic parenchymatous metritis and extensive ulceration of the cervix. The diagnosis of reflex paralysis was made and was confirmed by the results of treatment, for the paralysis and atrophy rapidly disappeared as the local affection was relieved by appropriate measures.—*El Dictamen*, May 20, 1884.

Some Peculiar Forms of Aphasia.—Dr. Brown-Séquard, at a recent meeting of the Société de Biologie of Paris (*Gazette des Hôpitaux*, No. 48, 1884), recounted some curious facts concerning aphasia. The first case was that of an individual who had lost entirely the faculty of speech. He possessed but one word in his vocabulary with which he sought to express all his ideas. Yet he was able to sing in a loud voice, enunciating the words and rendering the music with artistic feeling. The second case was that of a physician of Cincinnati, who had become aphasic in consequence of softening of the brain. This patient had lost completely the use of language during his waking moments, but talked well in his dreams. The third instance was observed in an individual who was likewise suffering from complete aphasia in consequence of a cerebral lesion. His powers of speech were restored during times in which he was delirious. Dr. Richet related a fact somewhat resembling those just cited concerning an old woman who had been the servant of a priest. Just before she died she repeated very distinctly a number of Hebrew words which she had heard her master pronounce thirty-five years before.

Nitrite of Amyl in Ammoniacal Urine.—Professor Von Dittel observed at the Vienna Medical Society that he had for a long time past, in obstinate cases of ammoniacal urine, found this substance very useful. A solution is made of three drops in one hundred and fifty of water, and a tablespoonful of this is added to about a quart of water, with which the bladder is washed out. The unpleasant smell of the urine diminishes immediately, and is replaced by a pleasant ether odor.—*Dublin Journal of Medical Science*, June, 1884.

THE BUBBLING CARBONIC WATER BATHS OF NAUHEIM.—Drs. Augustus and Theodore Schott publish an article under the above title in the *Berliner Klinische Wochenschrift*, No. 19, 1884. The object of the paper is to give an unbiased statement regarding the chemical composition of the Nauheim carbonic acid waters, together with their nature, their *modus operandi*, and the indications for their use. Preceding the paper proper are certain general remarks on the history of carbonic acid water baths. The analysis of the waters, conducted under the supervision of Prof. Fresenius, shows that they contain an amount of carbonic acid gas fully equal to that of any other springs. The chief indication for the carbonic acid baths is found in the emaciation and anæmia attendant upon chronic diseases, and in moderate degrees of cardiac insufficiency resulting from constitutional diseases. High grades of anæmia and of cardiac weakness, however, contra-indicate the use of these baths, and are aggravated by them.

IODIDE OF POTASSIUM IN PNEUMONIA.—Regarding pneumonia as a general disease with local manifestations, Dr. Schwarz recommended the use of iodide of potassium in six-grain doses every two hours, at the same time applying an ice-bag to the chest over the seat of the pulmonary lesion. All his cases thus treated recovered, some of them within two days. Dr. Gualdi (*Gazzetta Medica di Roma*, May 15, 1884) has similarly treated a number of cases, and reports most excellent results. He formulates the following conclusions based upon his experience with this mode of treatment: 1. Schwarz's method of treating pneumonia gives good results. 2. These results are even better in the case of children than in that of adults. 3. The treatment should be instituted at the beginning of the disease, for when commenced at a later stage the cure is less rapid and satisfactory. 4. The action of the iodide is exerted upon the fever and the general disease, and not upon the local lesion. 5. The iodine and the potassium become separated within the organism and each of them exerts a special effect. 6. The action of the ice is upon the local condition. It is useful in the period of pulmonary congestion, but injurious in the stage of hepatization.

NITRITE OF AMYL IN OPIUM-POISONING.—Dr. W. L. Johnson reports in the *Texas Courier-Record* for May, 1884, a case of opium-poisoning treated by inhalations of nitrite of amyl. The patient when first seen, three hours after having taken two ounces of laudanum, was deeply narcotized, pulseless at the wrist, making six respirations to the minute, perspiring freely, with cold extremities, and cyanotic. Belladonna and other remedies having failed, twenty to thirty drops of nitrite of amyl were poured upon a handkerchief and applied to the patient's nostrils. After two inhalations of the drug the man looked up and asked what was the matter. From that time he continued to improve and made a good recovery.

CHILL AS AN ETIOLOGICAL FACTOR IN PNEUMONIA.—In an address delivered before the Birmingham Branch of the British Medical Association (*Birmingham Medical Review*, June, 1884) Dr. J. Burney Yeo expressed the belief that chill has a causal relation of some sort to many cases of pneumonia, but thought that its influence was often overrated. It is notorious, he says, that pneumonia often occurs during the prevalence of winds, especially the winds of spring; and not with winds from any particular quarter, for it is found to prevail with southwest winds as frequently as with east or northeast winds. Now, in this connection we have rather overlooked the fact that winds are carriers of dust as well as conveyers of cold (or rather, abstracters of heat); and that while, on the one hand, they carry away heat from the surface of the body, on the other hand they gather up dust of all kinds, and blow all manner of micro-organisms into our air-passages. It has been noticed again and again that all depressing agencies may predispose to pneumonia, such as exhaustion from physical fatigue and depressing emotions, and it may be that exposure to a cold wind acts both as a predisposing cause, by the depression of the normal resisting power it produces by rapid abstraction of heat, and also as an exciting cause, by means of the micro-organisms it blows into our air-passages.

A RARE TUMOR OF THE ORBIT.—At a recent meeting of the Academy of Medicine in Ireland (*Dublin Journal of Medical Science*, June, 1884) Mr. Story exhibited a tumor about the size of a small pea which he had removed from the orbit of a girl aged twenty. It had existed from earliest childhood, and had lately increased in size. The tumor lay beneath the lower lid toward the inner canthus, was freely movable in all directions, strong and hard to the touch, and was covered by slightly discolored skin. When the patient stooped, laughed, cried, or took violent exercise, this patch of bluish skin swelled. When the superjacent soft parts were divided the little tumor came out without further interference. On section it was found solid, and formed of a series of irregularly concentric layers, which microscopical examination showed to consist of fibrous tissue and calcified matter of an unknown origin, together with cellular conglomerations of an indefinite character. Nothing resembling either bone or cartilage existed in the tumor, its hardness being due to new calcification. Mr. Story considered the tumor to be a phlebolith, the history of the case and the pathological appearances agreeing with that view as to its nature.

TREATMENT OF CORYZA.—Surgeon-Major G. E. Dobson writes in *The Lancet* of May 31, 1884, describing a plan of treatment for coryza, which is certainly simple enough, and which he claims is very effective. About a drachm of camphor, coarsely powdered, or shredded with a knife, is placed in a small pitcher, which is then half filled with boiling water. The patient, having made a paper cone large enough to surround his face by its wide extremity and the mouth of the jug by its narrow end, proceeds to respire freely, at each inhalation drawing the steam into his nostrils, and at each exhalation forcing it up against the outer surfaces of his nose and adjoining parts of the face. A twofold action is produced: the camphorated steam acts internally in a specific manner upon the whole extent of the mucous surfaces, and externally produces profuse diaphoresis of the skin covering the nose and face, there acting as a derivative from the inflamed Schneiderian membrane. The pitcher should be wrapped in a woollen cloth to retain the heat in the water, or, better still, a tin vessel, under which a spirit-lamp is burning, may be used. The respirations should be continued for from ten to twenty minutes, and should be repeated three or four times in as many hours. The writer asserts that great relief is always felt even after the first application, and that three or four usually effect a cure.

A NEW FORM OF CUIRASS FOR POTT'S DISEASE IN YOUNG CHILDREN.—As a substitute for the plaster-of-Paris jacket, Professor H. C. Wyman (*Medical Age*) has devised a method of treatment which is briefly as follows: The child being placed in such position that the spine is extended to nearly the normal limit, a piece of Canton flannel, large enough to cover one-third of the circumference of the trunk, is laid on the back. A sheet of absorbent cotton having been placed over this, a cheese-cloth bandage six inches wide and several yards long, with the meshes carefully filled with plaster-of-Paris, is dipped in water and folded lengthwise over the whole. When rubbed smooth with the hand, so that it is perfectly adapted to the contour of the parts, a bandage is applied around the trunk, with figure-of-8 turns about the shoulders and pelvis, and the plaster allowed to set. The jacket thus constructed is in the form of a splint, and can be removed every night.

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IMPROVEMENT IN INFANT DIET.

ANY step toward even the partial solution of the difficult problem of artificial feeding during infancy will be hailed with satisfaction by all physicians. The heavy mortality during the first year of life in those deprived of breast milk is, especially in cities, an important factor in the compilation of death-lists. Social science can roll up statistics, but is unable to suggest a remedy. Increasing importance is given to this question when we consider the large number, especially of American women, who cannot or will not nurse their children. In the majority of cases a wet-nurse cannot be procured, either from their scarcity or the attendant expense, and an artificial diet becomes imperative. A host of infant foods are offered as a perfect substitute for the mother's milk. All of these preparations, however, differ widely from the milk for which they are to be substituted. As a result, while some infant foods may produce a plumpness, they are all more or less colicky in their action. They are particularly not adapted to early infancy, when artificial food should not only be conformed to the baby's digestion, but should anticipate any future disturbances that are so apt to accompany the early months of life. Some of the preparations contain large quantities of unchanged starch that a young baby is unable to digest. Even the Liebig foods only claim to have transformed starch into glucose and thus removed one source of trouble; but the greatest cause of indigestion in cow's milk, the caseine, is not directly affected by them at all. It is true they are valuable by physically acting as attenuants of the caseine, as the arrowroot and cracker water formerly used, but they exert no chemical or physiological action upon this substance that is the source of so much of the indigestion during infancy.

In 1881 a council was held at Salzburg for the purpose of considering the subject of infant diet. Gerhardt, Henoch, Biedert, Soltmann, and other leading authorities were present. All agreed that advances in physiology only prove that mother's milk is quantitatively and qualitatively best suited to the development of the child. They likewise agreed that animal milk is the best substitute for breast milk. In discussing the subject of infant foods the chairman stated that it was unanimously agreed that these preparations can in no way be substituted for mother's milk, and, as exclusive food during the first year, are to be entirely rejected. The important question then to be considered is, how cow's milk can be best modified to resemble human milk.

Before discussing this question we will briefly notice the well-known points of difference between these two varieties of milk. Woman's milk is thin and watery, with a peculiar animal taste and a persistent alkaline reaction. Cow's milk, although containing more water and less solid ingredients, is more opaque, and very frequently has a slightly acid reaction. Human milk contains more milk sugar and fat, but a smaller percentage of albuminoids than cow's milk. A point of great importance is that the fraction of the total albuminoids coagulable by acids in cow's milk is much greater than that in human milk. The caseine of cow's milk does not coagulate in soft flakes as in human milk, but in harder and more indigestible masses. The usual method of preparing cow's milk is to add sufficient water to reduce the percentage of caseine to its relative amount in human milk. But in so doing the sugar of milk and fat, both already in smaller quantities in cow's milk than in woman's milk, have their amount still further reduced. A little loaf sugar is generally added to bring up the saccharine ingredients to their normal ratio. Hence to dilute the caseine properly the fat is diluted far too much. Now, if fat is removed from the milk, in addition to the loss of nutrition involved in its absence, the caseine coagulates in still harder masses. Even after the proper quantity of water has been added to cow's milk, with perhaps an attenuant, as a little starch or gum, the clot is only partially and incompletely diminished in size and density. The problem, then, is how to reduce the caseine and increase its digestibility, while at the same time the other important ingredients of the milk are maintained up to the standard of human milk.

Professor Pfeiffer, of Wiesbaden, in considering this subject brought out the valuable idea of peptonizing the milk. By this process the hard and objectionable caseine is physiologically changed into readily soluble peptone. The principal source of irritation in artificial feeding is thus removed. Cow's milk thus treated becomes thinner and bears a closer resemblance to human milk, while even if all the caseine is not digested, that which remains coagulates in loose flakes. Hence a digested, or easily digestible, caseine results from this process. As milk peptone has a bitter taste, it is as well not to completely transform the caseine. This artificial digestion of milk is effected by means of an extract of pancreas. Dr. William Roberts has tabulated four ferments as being present in the pancreatic juice—trypsin, curdling ferment, pancreatic diastase, and emulsive ferment. The trypsin changes proteids into peptones in neutral or alkaline media, and thus for practical purposes of artificial digestion, especially in reference to milk, has a great advantage over pepsine, which is only potent through the interaction of an acid. The caseine in the cow's milk is altered and partially or completely digested by the trypsin; hence any preparation of pancreas that does not contain this ferment in an active condition will be useless for peptonizing milk. Now that a reliable extract of pancreas can be obtained, this element of uncertainty is obviated. It may be asked whether the practical results of peptonizing the caseine of cow's milk are as beneficial in early infancy as the theory would indicate

As far as tried this question can be answered in the affirmative.

Professor J. Lewis Smith has the credit of instituting a series of trials at the Foundling Asylum which have thus far given satisfactory results, and he considers that peptonizing milk promises to mark an advance in infant diet. We have thus seen that cow's milk is the best substitute for human milk; that the former is apt to disagree with the infant on account of definite chemical, physical, and physiological differences that have been accurately ascertained, and that we now have the means largely to overcome. Let ordinary pure cow's milk be diluted with water, that has previously been boiled to destroy all germs, until its percentage of albuminoids has been reduced to the proper amount. Next add to it enough cream to make up the fat, and some sugar of milk. Then peptonize it with reliable extract of pancreas for the alteration of the caseine, and there is produced the best physiological imitation of mother's milk. The peculiar vital or maternal properties of human milk must always elude analysis, but to this limit we have well-nigh reached. Science, as always, stops before the mystery of vitality.

AN ENGLISH VIEW OF THE MORAL TENDENCY OF THE AMERICAN DOCTOR.

THE *Lancet*, in discussing the subject of the American Medical Association, takes the trouble to inform its readers that "there is a natural tendency in a very democratic country like America to demand that one man shall be considered as good as another, . . . and to obliterate the traditional morality which enjoins modesty of professional pretension and forbids the use of unworthy means for acquiring reputation and practice." Without stopping to demonstrate more clearly this relation between democracy and immoral pretensions, information is then given as to who a homœopath is, why he should not be met in consultation, and finally the American profession is told that they "will have a rough time of it if they do not stoutly maintain the principles" that are editorially indicated.

Thanks, awfully. But our esteemed contemporary, if correct in discovering our moral tendency, at least misapprehends the real issue before us, and leads its readers to infer that our moral degeneracy will be checked if we refuse to consult with irregulars. Now those who are referred to as "persons that ought to know better," appreciated long ago that there was some kind of a tendency in the profession not entirely praiseworthy, and saw that something was needed to check it, since existing codes did not. For one thing, a code was drawn up which forbade advertisements, and which tried to substitute individual liberty and responsibility for a restriction that had been long violated and dead. But, besides this, on all sides there has been an attempt to reform medical education, an attempt deprecated as "vulgar" in certain directions, but now warmly seconded by the mass of the profession.

The true issue to-day in America, as we would inform our didactic contemporary, is the educational, and coincidentally moral, elevation of the profession. For this we are striving, and we shall indeed "have a rough time of it" if this is neglected. A profession carefully educated, and composed of men who have had some moral training, will be certain to spurn quackery and fraud; and the question whether a man shall be at liberty to consult with whom he pleases becomes a pitiful side-issue.

A CRITICISM OF THE DEATH-RATE IN NEW YORK CITY.

A CERTAIN writer of the British [medical press seems anxious to do the people of this city a great statistical injustice. He has taken the pains to prove to the satisfaction of his unbiassed and cosmopolitan mind that the population of New York is now only a million instead of a million three hundred and fifty-five thousand, as our Board of Health fondly believes, and that consequently we are dying one per cent. faster than has been supposed, and is weekly reported. The true mortality rate, says this correspondent, is 34.01, or more, per 1,000, instead of 25.19, as officially given. If this charge be true, New York is one of the unhealthiest cities in the world, and our city Board of Health is shamelessly deceiving the people.

The reasons given by the critic referred to are as follows. He writes, speaking of the alleged great increase in the city's population:

"It is fair to assume that the residents in New York have increased since 1880, but not in the ratio indicated. That, however, I will pass by. The fact that the census return is inaccurate, and in excess of the truth, is more important. In the United States the census is not taken as it is in England. No day is fixed. On the last occasion it required fourteen months to get the returns in. Many of the persons whose names go on the census from their places of business in the city are non-residents, and they are put on record again in Brooklyn, or New Jersey, or Staten Island, or wherever they happen to live. I and my family were among the large number who were taken twice at the last census. Twenty-four per cent. of the members of the Stock Exchange are non-resident. In the Cotton Exchange the numbers are about the same. In the Produce Exchange sixty per cent. of the members live out of town. The resident population of New York does not exceed 1,000,000. I doubt if it is so much."

He then proceeds to make another estimate based upon the registration of voters. The total number registered in 1883 was, he states, 182,531; multiplying this by five, we get only 912,655 as the total population, which is nearly half a million less than the last estimate (1,355,000), upon which our sanitary authorities base their returns.

We do not propose to attempt to prove that New York is a remarkably healthy city, and has over a million of inhabitants. We leave this to our sanitary authorities. But we would call attention to certain sources of error in our critic's mode of calculating. The census is taken in June, when the swarms of tramps and vagabonds which infest the city and swell its mortality, as well as thousands of respectable families have left town for the summer. Any estimate of population based upon the number of registered voters is utterly untrustworthy, for reasons which American citizens very well know, and which need not be entered upon here.

New York City receives a vast influx of transients, including immigrants, of whom the sick remain while the well pass on. Consequently the death-rate in its institutions is very large, amounting generally to one-fifth of the whole.

The causes of the high and hypothetical death-rate estimated as above are asserted to be bad air, bad water, bad food, bad drainage, imperfect sanitary measures, and crowded tenement-houses, which we are told exceed in filth even the London slums. All of which is news that ought to be gratefully received by our sanitary authorities, whose eyes have heretofore been blinded by a mistaken patriotism and a desire to make a good showing to the people.

Finally, says *The Lancet* correspondent, the great mortality is due "last, but not least, to the inefficiency of medical help. I say it advisedly, but emphatically, after several years of close observation in the United States, that the rate of mortality generally, as well as in the city, would be very materially lowered if the standard of medical education were adequately raised."

To this we would simply say that he is probably in a measure right; yet the late President of the American Medical Association has asserted it to be in bad taste, if not absolutely vulgar, to refer to the fact that American medical education is not just what it ought to be.

NOTES ON SUMMER VACATIONS.

We had declined several excellent articles upon the timely subject of doctors and summer vacations. We have, however, recently received from various sources several such pertinent letters regarding the relations of summering physicians to patients and public that it was deemed wise to present them at once to our readers.

The first is from the father of a family who is boarding at the seaside:

Mr. Editor, Dear Sir: I have sent my family, consisting of my wife and six children, to spend the summer at —— ——. I am paying ten dollars a week apiece, a rate which is likely to consume most of the money I have laid aside for the summer. When I am at home my physician charges me $2 a visit, but last year at the sea-shore I was charged $5, which included social calls and several bouquets for my wife. Will you kindly use your influence to persuade the summer-seaside physician to be more reasonable in his charges and leave me a little money with which to move back to town in the fall? Very truly yours, Paterfamilias.

Another is from a lady in the city:

Dear Mr. Editor: I expect to be confined about the middle of August. My family physician is obliged to go to Europe this summer to study, and all his acquaintances will be in the Adirondacks at that time for their health. I know of no physicians who will be in town then, except a few homœopaths and the members of the Assistant Sanitary Corps. What am I to do?

Sincerely yours, —— ——.

A third is from a local physician at a fashionable health resort in the interior:

Dear Doctor: I have a very fair practice in this town during the year, but I have until lately looked forward to the summer months as being especially useful and lucrative. For several years past, however, Dr. A——, of New York, has been up here and taken all the gynecology, Dr. B—— has absorbed the ear, eye, and throat cases, and this year I learn that Dr. C—— is expecting to be here to attend to obstetrical cases and nervous exhaustion. It seems to me that this is hardly fair, as I believe that I have been quite successful with visiting invalids before and only charged one-third as much. But I am not, unfortunately, a New York or a Philadelphia professor. Can you not secure a little justice to us rural doctors?

Yours very truly, —— ——, M.D.

Finally we have received the following curious letter from the proprietor of a large seaside hotel:

Dear Sir: I wish to secure a physician to reside at my hotel during the summer, and I beg for your advice in getting one who will be a little more satisfactory to my guests in certain respects than those who have heretofore been established with me. The medical gentlemen previously here have all been of excellent manners and fine professional attainments, but their charges have been enormous, even compared with my own. Dr. X——, who was here last year, charged Mrs. L—— $5 for brushing by her on the piazza, and $10 for putting her baby in the omnibus. As he danced several times with her daughter she could not refuse to pay. But such things are making my hotel unpopular with invalids.

Can you suggest some competent man who charges moderately?

Very respectfully yours, —— ——.

The Cholera in Europe.—The progress of cholera at Toulon may be best seen by the following table, showing the number of deaths since the disease was first noticed, June 14th: June 14th, death 1; June 19th, death 1; June 20th, deaths 2; June 21st, deaths 3; June 22d, deaths 13; June 23d, deaths 5; June 24th, deaths 12; June 25th, deaths 9; June 26th, deaths 10; number of cases, 62; June 27th, deaths 4; June 28th, deaths 6. On June 29th, two cases of apparent cholera were reported at Marseilles; on the next day five deaths from the disease were reported. A case was also reported at Saluzzo, Italy, on the 30th. The opinion so far continues to be that the disease is undoubtedly Asiatic cholera. The form of the disease was at first reported to be mild. A great deal of alarm has been excited throughout Europe. Extraordinary, and in some cases foolish, precautions are being taken to prevent the spread of the disease. The roads and passes in France leading from Toulon have, it is said, been narrowly guarded. Spain has established a military cordon along its frontier. Quarantine against vessels from French Mediterranean ports has been established at Madrid, Trieste, Gibraltar, and other ports. A medical inspection of railway passengers from Southern France has been established in Italy, Austro-Hungary, and other places. Professor Virchow takes the opportunity to blame the French Government for careless sanitary measures. Toulon appears certainly to have been a very dirty place, but Marseilles was reported clean and healthful at the time the cholera appeared.

News of the Week.

St. John's Guild.—This excellent organization, that has been in existence since 1866, hopes to continue its excursions this summer for the benefit of sick children. Last summer the floating hospital made 32 regular excursions and 12 extra excursions, carrying 29,189 children and mothers or guardians. The sea-side nursery also did good work in keeping children for several days or a week in the country. Many children with diarrhœal diseases had their lives saved in this manner. Money is needed to carry on this work, that commends itself to all charitable persons.

The State Board of Health has discharged its corps of experts engaged to examine into adulterations in food and drugs, owing to lack of funds.

New Asylum for the Chronic Pauper Insane.—The Commissioners of Charities and Correction have bought a tract of land of 1,067 acres on Long Island, between West Deer Park and Farmingdale. They intend to erect upon it buildings for the chronic incurable pauper insane.

The Sundry Civil Appropriation Bill, as reported to and passed by the House, provides for a repeal of the law creating the National Board of Health.

The Medical Register of New York, New Jersey, and Connecticut for 1884–85, which has just been published, contains the names of 6,247 physicians. Of these the New York State list contains 2,686 against 2,684 last year, and the New York City list 1,789 names against 1,661 in the previous year. The number registered in the State at large, therefore, has decreased; that in the city increased.

The Worthy and Suffering Poor of this city have only twenty-five dispensaries out of which to select their medical and surgical attendants. We chronicle with pleasure, therefore, the organization of the Good Samaritan Dispensary, which is "to give medical aid to the indigent," thereby supplying a long-felt want.

The Summer Sanitary Corps of physicians has been appointed, and report for duty July 6th.

The Garfield Memorial Hospital, Washington, D. C., opened on June 18th for the reception of patients.

The Cattle Disease in Kansas and Illinois.—Professor James Law has made an elaborate report upon the disease which appeared last winter and spring among the cattle in Kansas and Illinois. He concludes that the animals suffered from dry gangrene, the result of eating ergoted hay and corn. Professor Law's report contains a valuable review of the subject of ergotism in cattle.

The Vote to Admit Women into the Massachusetts State Medical Society has led the *Boston Medical and Surgical Journal* into the expression of certain atrabilious Anglicisms. It refers to the practice of medicine by women as a "foolish fad." Many will believe this to hit the case exactly; but they must admit also that something has to be conceded to abstract justice, the unmarried legion, and social peace.

Other Discoverers of the Cholera Bacillus.—It is reported that Dr. Carter, Acting Principal of the Grant Medical College at Bombay, has found the cholera bacilli in the perfectly fresh dejecta of cholera patients. Dr. Weir, of Bombay, has found the same bacilli in the well-water drank by cholera patients.

Professor William Pepper has succeeded Professor Stillé at the University of Pennsylvania, instead of at the Jefferson Medical College as stated.

Dr. Yeng Tis Hing.—On the recommendation of Dr. Woolsey Johnson, Yeng Tis Hing, a Chinaman, was recently registered as a practising physician at the Board of Health. It remains to be seen whether he is Old Code or New Code.

Bequests to Medical Charities and to Harvard Medical College.—The late Samuel W. Swett left in his will a bequest of $50,000 for the Massachusetts General Hospital, to establish a convalescent department; $10,000 to the Children's Hospital of Boston; $10,000 to the New England Hospital for Women and Children; $20,000 for the Medical Department of Harvard College.

Deaths in a Foundling Asylum.—Somewhat sensational accounts are given in the daily papers of a foundling home which was opened last January, at Hammonton, N. J., under the charge of a Miss Niverson. Twenty-three infants from Philadelphia, New York, and elsewhere were brought to the institution. It is stated that all but two of these have died, not having received meanwhile proper medical attendance. The New Jersey Health Board will investigate the matter. The deaths occurred chiefly from measles.

Medical Instruction in Japan.—A meeting under the auspices of a committee of gentlemen consisting of Bishop Stevens, Drs. D. Hayes Agnew, William Pepper, and others, was held in Philadelphia, June 12th, for the purpose of inaugurating a movement looking to the establishment in Japan of a medical college, hospital, and training school for nurses. The plan is largely the outcome of the efforts of Dr. John C. Berry, formerly of Maine, but for the past twelve years a medical missionary in Japan. Dr. Berry explained the project at length. He estimated that to establish a permanent endowment of one professorship $45,000 would be required. Resolutions were adopted indorsing the project, and in furtherance of the plan as contemplated a committee was appointed to confer with similar committees in other cities of this country.

The International Medical Congress.—We have received the programme of the eighth session of the International Medical Congress to be held in Copenhagen, August 8 to 16, 1884. All medical men legally qualified to practise in their respective countries are entitled to membership on paying the subscription fee of twenty crowns (Danish), equivalent to $5.50 in our money. Each member will receive a copy of the "Transactions" when published. The work of the Congress is divided into fourteen sections, meetings of which will be held daily from 10 to 12 and 1 to 3. The general meetings will be held each day from 4 to 5.30, and in addition some address of a more popular character will be delivered in the evening from 8 to 9.30. The official lan-

guages of the Congress are English, French, and German, but communications which cannot be made in all three languages will be given in French. The number of papers and communications prepared or announced for delivery in the general and sectional meetings is over two hundred and fifty. Members of the Congress, through the courtesy of the Danish Government and the United Steam Navigation Co., of Copenhagen, will be furnished with return tickets gratis from Copenhagen to the frontiers of Denmark (Fredericia or Kiel). A bureau of information for the benefit of the members will be established at the station of the Korsör-Copenhagen Railway. All letters of inquiry in regard to lodgings, etc., should be sent before the end of July to Professor C. Lange, Secretary-General, 22 Kronprinsessegade, Copenhagen, K., Denmark.

The late Dr. J. G. Adams.—At a stated meeting of the Council of the New York Academy of Medicine, held June 24, 1884, the following preamble and resolutions were unanimously adopted :

Whereas, The Council of the New York Academy of Medicine has heard with profound regret of the recent death of their associate, Dr. John G. Adams, an original Fellow, and, at the time of his decease, Corresponding Secretary of the Academy ;

Resolved, That the Council desire to put on record their warm appreciation of his fidelity to his convictions, his genial friendship, his ripe culture, his courtesy, his liberal, earnest, and persistent interest in the Academy, and of his gentlemanly and Christian character.

Resolved, That a copy of the above preamble and resolution be entered on the minutes, be published in the medical journals of the city, and sent to his relatives.

G. M. Smith, M.D.,
H. T. Hanks, M.D.,
Committee.

The Late Dr. William Hustace Hubbard.—*Whereas*, Dr. William Hustace Hubbard, a late member of the house-staff of Bellevue Hospital, has been removed by death, in the beginning of his professional career ; therefore,

Resolved, That this board now expresses its appreciation of his manifest sterling qualities as a man, and of his faithfulness and earnestness in his professional work ; also,

Resolved, That in the death of Dr. Hubbard we have lost a worthy assistant, and the profession at large a most promising, able, and upright member.

Resolved, That we tender our heartfelt sympathies to his respected father Dr. Samuel T. Hubbard.

W. Gill Wylie, M.D.,
A. Brayton Ball, M.D.,
George L. Peabody, M.D.
Committee.

Another Microbe is Born.—It was discovered and cultivated by M. Duclaux. It is that of the disease known as the *bouton de Biskra*. A patient from Tunis suffering from this affection was admitted to the Hospital St. Louis, where the pathology of his condition was investigated.

Bergh and Pasteur.—Mr. Henry Bergh, of this city, has sent some of his ravings, in the form of a letter, to the President of the Paris Society for the Prevention of Cruelty to Animals. We publish some of the gems from this letter. Mr. Bergh writes : "But, revolting as are these canine massacres, they fall far short of the barbarities of M. Pasteur, both in their atrocity and in the fatal consequences to the physical as well as moral well-being of the French nation. In the outraged name of science this merciless empiric is poisoning the flocks and herds of France, after the fashion of his predecessor, the notorious Jenner, of England, who nearly a century ago commenced inoculating his countrymen with a noxious mucus taken from diseased animals, under the pretence of preventing and curing small-pox. That the human race, through the unfortunate existence of Jenner, has been hopelessly deteriorated ; that scrofula, cancer, and consumption, along with their hideous long trains of chronic diseases, is the fearful legacy of that man's presence on earth, some of the most learned and conscientious scientists have declared to be their belief. A French Jenner now crawls to the earth's surface and begins the fiend-like and disgusting work of polluting the bodies and flesh of the lower animals ! Moreover, it is proposed in the Chamber of Deputies to reward this man's detestable crime by voting him a pension also."

Death from Chloroform given in Child-birth.—A death under chloroform occurred recently at St. Bartholomew's Hospital, attended by circumstances of an unusual character. The patient was a woman seven and a half months pregnant, who had been admitted into hospital on account of placenta prævia. On the day preceding the fatality, chloroform had been taken by the woman without any symptoms indicative of danger ; but soon after the second administration was commenced, respiration and pulse became suspended, and death was unmistakable.

Obituary.

JOEL FOSTER, M.D.,

NEW YORK.

Dr. Joel Foster, one of the oldest practising physicians in this city, died on June 29th. He had been ill for about a month and a half, but was not confined to his bed until a week prior to his death. Then he sank gradually, and expired at an early hour on the above-mentioned date. He was born in Barnard, Vt., March 10, 1802. His ancestors were among the original settlers of Vermont and figured in the French war, and he was also a distant relative of General Stark, of Revolutionary fame. He first studied medicine in Woodstock, Vt., under Dr. Gallop, and afterward removed to Philadelphia, where he resumed his studies in Jefferson College. Here he graduated with the highest honors.

After securing his diploma he married and began his work as a physician in Schoharie, N. Y. In 1855 he came to this city, and since that time has been busily engaged in his practice. When the President called for volunteer physicians, after the second battle of Bull Run, Dr. Foster secured thirty-seven doctors from the Academy of Medicine in this city and started for the field. He did good service in administering to the wants of the wounded, and gained honorable mention for his work in this respect. Dr. Foster was the oldest life member of the State Medical Society, and was one of the founders of the Academy of Medicine in this city. He was also prominently identified with the Infant Asylum. He was a prominent and active abolitionist and was a friend of William H. Seward.

Reviews and Notices.

Diagnosis and Treatment of Diseases of the Heart. By Constantine Paul, Member of the Academy of Medicine, Physician to the Lariboisière Hospital. New York: William Wood & Co. 1884.

Dr. Paul's treatise on cardiac affections, which is the March number of Wood's Library, is a systematic and practical exposition of this interesting and important class of affections. In all that relates to etiology, symptomatology, and diagnosis, we know of no better work. In the chapter on treatment we miss that detailed account of what is at present known with regard to the therapeutics of the various stages of cardiac diseases that one might expect in a special work of this kind. In spite of this drawback, however, the work well repays a careful perusal.

Post-Nasal Catarrh and Diseases of the Nose causing Deafness. By Edward Woakes. Illustrated with Wood Engravings. Pp. 224. Philadelphia: P. Blakiston, Son & Co. 1884.

This interesting volume is intended to show the relations that exist between that portion of the upper air tract embraced in the nasal region and the organ of hearing. It would seem from the point of view taken by the author that the otologist must seek for the cause of many aural symptoms in the nervous relationship known to exist between the different regions about the head, especially those between the naso-pharynx and the ear. The extension of catarrhal inflammation from the pharyngeal vault to the ear, *via* the Eustachian, thus seems *not* to be the principal cause of ear disease, as some have supposed.

While the author's style is often unnecessarily involved, and simple facts are frequently made to appear more obscure to the general medical reader than needs be, yet, on the whole, the subject is presented in an entertaining and instructive manner. He has brought into the field of otology the methods of the study of disease which have been already so successfully employed in other departments of medicine, namely, the physiological. The book may be taken, as far as it goes, as a safe guide in the study of aural neuroses.

The present volume is to some extent an elaboration of a former work, in which the nervous mechanism concerning disturbances about the head, and especially about the ears, was discussed. In the introductory chapter there are observations on the correlating and reflex functions of the sympathetic system, which will be found to be broadly instructive, and which go to show that in any successful plan of treatment of aural diseases the local medication must often occupy a subordinate position.

The second chapter treats of the etiology of catarrh, acute and chronic, and what the author designates as the pre-catarrhal state; Chapter III. discusses the mechanism of taking cold; Chapter IV., chronic or post-nasal catarrh, and its sequences; the hygienic management of the catarrhally predisposed is considered in Chapter V.; the diagnosis of chronic catarrh, examination of patients, etc., is taken up in Chapter VI. Other chapters are devoted to acute catarrh, chronic pharyngitis, and the pharyngeal tonsil—their pathology and treatment. Chapters XI. and XII. treat of nasal stenosis.

The chapter on "taking cold" is an admirable exposition of the subject, and should be studied by every one who has to treat nasal catarrhs.

Although the author has made considerable additions to the physiological aspect of the subject, pathological conditions are dwelt on more briefly than seems commensurate with the detailed consideration of the former. Attention is given to the treatment of nasal affections, and some useful suggestions may be found under this head, although the employment of sprays, the nasal douche, and syringe seem to be recommended rather more freely than would be done by most otologists on this side of the water. The treatment of aural affections receives a share of attention, and here Dr. Woakes follows the beaten track. He seems so be a warm advocate of the early incision of the drum-head in acute processes affecting the middle ear, although recommending the procedure with some appearance of caution; this, together with the subsequent free use of the Politzer air-douche and running hot water into the ear seems, to some of us at least, rather heroic. The work on the whole is a valuable contribution to the subject of which it treats, and it should be in the hands of every specialist in this department of medicine, as well as every general practitioner.

Medical Diagnosis, with Special Reference to Practical Medicine. By J. M. Da Costa, M.D., LL.D., Professor of Practice of Medicine and of Clinical Medicine at the Jefferson Medical College, Philadelphia, etc. Sixth edition. Philadelphia: J. B. Lippincott & Co. 1884.

It is pleasant to have to record the appearance of a new edition of Da Costa's well-known medical diagnosis. The work is thoroughly appreciated here, and its translation into foreign tongues shows the estimation in which it is held abroad. The present edition is fully up to date, several not unimportant additions having been made. It is not a work of reference, but rather one that should be studied from beginning to end.

Vorlesungen über Pharmakologie. Von Professor C. Binz, Ord. Professor, Direktor des Pharmakologischen Instituts der Universität Bonn. I. Abtheilung. Berlin: Aug. Hirschwald. 1884. Lectures on Pharmacology. By Dr. C. Binz.

Professor Binz, of Bonn, hardly requires an introduction to the American reader, his original contributions relating to pharmacological subjects having been frequently noticed by the medical press both of England and our own country. The volume before us comprises Part I. of the subject-matter of the lectures delivered annually at the University of Bonn. Two succeeding parts will complete the work. The author has a happy faculty of infusing a new interest into an habitually dry and tedious subject. In this way the book contrasts very favorably with the average Materia Medica and its tiresome enumeration of superfluous details. The pharmacology of Binz, judging from this the first volume, is practical and yet strictly scientific, clear and concise, and yet complete enough to satisfy the demands both of student and practitioner. It goes without saying that the work is fully up to date. We believe that an English translation would find a ready welcome in our country.

The Diseases of Children. A Handbook for Practitioners and Students. By Armand Semple, B.A., M.B. Cantab., M.R.C.P. Lond. Pp. 352. New York: G. P. Putnam's Sons. 1884.

This is a small volume, and presents the subject of pædiatrics in a more condensed form than is the case with the usual treatises. The volume does not strike us as having any great merit aside from its compactness. There is no evidence of originality in thought or method, and we should doubt if Mr. Semple had had a long experience with children's diseases.

In this respect it is in striking contrast with Henoch's work. The author also is not entirely free from misleading statements, as when he describes croupous pneumonia, leaving one to infer that it may attack children at any age, and independently of broncho-pneumonia.

For all this, however, the book is a very fair presentation of its subject, and is in the main trustworthy. It is clearly written and systematically arranged. The publishers have printed it in excellent style.

Medical Annals of Baltimore. From 1608 to 1880, to which is added a Subject Index and Record of Public Services. By John R. Quinan, M.D. Baltimore. 1884.

This volume represents a great deal of painstaking labor, and will be of much local interest and value.

Transactions of the New York Pathological Society. Vol. IV. Based on the Proceedings of the Year 1881, and Supplemented from the Records from 1844. John C. Peters, M.D., Editor. New York: Printed for the Society. 1882.

The New York Pathological Society is one of the best medical societies in this city. Founded forty years ago for "the improvement of its members in pathology, and in the diagnosis and treatment of disease as founded on pathology," it has ever held this object prominently in view, and that it has lost none of its original fervor in the advancement of medical science this present volume of the Transactions bears abundant testimony. The book is neatly printly and strongly bound, and contains more matter of solid worth in its 380 pages than many a more pretentious tome.

The Medical Directory of Philadelphia for 1884. Edited by Samuel B. Hoppin, M.D. Philadelphia: P. Blakiston, Son & Co. 1884.

This little volume contains, besides the list of the regular physicians of Philadelphia, the names of all the homœopathic and eclectic practitioners, and of persons practising medicine without diplomas, but registered under the laws of the State. There are also lists of druggists, dentists, and graduates of recognized veterinary colleges, as well as non-graduate veterinary surgeons and dentists.

The General Practitioner's Guide to Diseases and Injuries of the Eye and Eyelids. By Louis H. Tosswill, B.A., M.B. Cantab., M.R.C.S., Surgeon to the West of England Eye Infirmary at Exeter. London: J. & A. Churchill. 1884.

The author's aim in writing this little book was to give to the general practitioner a manual to which he might refer for guidance in the diagnosis or management of the more common diseases and injuries of the eye. And he has succeeded admirably in his attempt. The book is a model of brevity and clearness of description, and is entirely free from the technical terms and mathematical problems which are usually so confusing to the ordinary reader of works on ophthalmology.

Diseases of the Bladder, Prostate Gland, and Urethra. Including a Practical View of Urinary Diseases, Deposits, and Calculi. Illustrated by Numerous Wood Engravings. Fifth Edition, Revised and much Enlarged throughout. By Frederick James Gant, F.R.C.S., Late President of the Medical Society of London; Senior Surgeon to the Royal Free Hospital; Author of "The Science and Practice of Surgery." New York: Bermingham & Co. 1884.

This, the fifth, edition of Mr. Gant's well-known treatise on diseases of the bladder and neighboring organs comes to us greatly enlarged and revised. Every chapter, indeed almost every page, shows marks of improvement, and of such changes as were necessary to be made in order to maintain the character of the work as a thoroughly reliable guide for the surgeon in dealing with these affections. The author treats not only of the ordinary and more common diseases of these organs, but enters also somewhat at length into the exceptional circumstances in which the surgeon may be placed, and sets down rules, as far as rules can be thus set down, for his guidance in all the straits in which he may find himself. Somewhat over one hundred out of the six hundred pages of the book are devoted to the consideration of urinary diseases and of the nature of the deposits in this fluid. While the author presents in his work but little that is, strictly speaking, new, or which may not be found in one or another of the treatises upon the subjects which it embraces, there are, nevertheless, few books in which one may find so complete an exposition of all diseases relating to the urinary organs as in this. It is, furthermore, by no means a mere compilation, but possesses that peculiar freshness which is a sure evidence that the author writes from personal knowledge, and has not simply clothed the ideas of others in language of his own.

A Study of the Bladder during Parturition. By J. Halliday Croom, M.D., F.R.C.P.E., Physician to the Royal Maternity Hospital; Assistant Physician for Diseases of Women, Royal Infirmary; Examiner in Midwifery in the University, and Lecturer on Midwifery and Diseases of Women, School of Medicine, Edinburgh. Edinburgh: David Douglas. 1884.

The object of this book, containing the substance of several papers communicated to the Edinburgh Obstetrical Society, is to show the extent and manner in which the bladder and its contents are influenced by parturient efforts. The author states that the sources of pressure upon the bladder are three: *a*, Change of shape in the uterine ovoid; *b*, stretching of the cervix; *c*, pressure by the abdominal and other respiratory muscles, *e.g.*, diaphragm, levator ani, etc. The quantity of urine in the bladder does not influence pressure, provided always the point of over-distention is not reached. The minimum pressure is found during the first stage, and amounts to .1 lb., while the maximum occurs during the second stage, and is about 3.2 lbs. on the square inch. The work evidences a large amount of painstaking investigation on the part of the author, but the subject is one in which the ordinary practitioner would take but a languid interest.

Beginnings with the Microscope. A Working Handbook, containing Simple Instructions in the Art and Method of Using the Microscope, and preparing Objects for Examination. By Walter P. Manton, M.D. Illustrated. Pp. 73. Boston: Lee & Shepard. 1884.

This little book will be found very useful for beginners in microscopical study, who are often appalled by the size of the standard treatises on this subject. The author has here given directions for the preparing, staining, and mounting of the objects to be examined, such as are needed by those who have had little or no experience in microscopical work. For advanced students it is of course too elementary, but for beginners it is eminently practical, and may serve as an introduction to the larger works.

The London Pathological Society.

The thirty-fourth volume of the Transactions of this Society is before us. Perhaps our own Society may get some hints from it. It was founded in 1846, and ours in 1844. Its presidents always serve two years, ours generally only one. Its first president, in 1846, was Charles J. B. Williams, ours was Willard Parker, in 1845, although Dr. John A. Swett served as chairman for six months in 1845. Its other presidents have been Charles Aston Key, Peter Mere Latham, Cæsar N. Hawkins, Benjamin Guy Babbington, James M. Arnott, Sir Thomas Watson, Sir William Ferguson, James Copland, Sir Prescott G. Hewitt, Thomas B. Peacock, John Simon, Richard Quain, John Hilton, Sir William Jenner, George D. Pollock, Charles Murchison, Jonathan Hutchinson, Samuel Wilks, John W. Hulk. It always has eight vice-presidents, nine surgical councillors and nine medical, none of whom are vice-presidents; two honorary secretaries, one medical the other surgical; two trustees, and one treasurer. The whole number of members in 1883 was 650, and 27 new members were added during the year.

Dr. Peacock, just deceased, generously bore the whole cost of publishing and issuing a general index to the volumes from 1864–1874, viz., vols. 16–25.

Dr. Edwards Crisp, just deceased, during a long course of years insisted upon the advantage of studying the morbid anatomy of animals, and since 1864 was continually exhibiting specimens, which he had procured from the Zoological Gardens and elsewhere. Dr. Crisp was the pioneer of the London Pathological Society in the study of comparative pathology, and it must have gratified him to witness the establishment by the council, at the suggestion of Dr. J. Hutchinson, of a comparative pathology committee. Another committee has been formed to obtain information respecting the uncompleted cases in the Transactions, which has already reported.

Owing to the large number of specimens offered, a great many could not be received on account of the limit of time at the disposal of the Society, and extra meetings are under consideration.

In 1882 there was £139 balance in the treasury; four hundred annual subscriptions produced £420; twenty-three admission fees, £24; two life fees, £31; two members in arrears, £2. The sale of the Transactions to non-members produced £62, sale of illustrations, £15. Total income, £703.

The Society paid to the Royal Medical and Chirurgical Society for use of rooms, gas, etc., £63; refreshments, waiters, etc., £36; for janitor, microscopes, and lamps, £11; for printing, binding, etc., of Transactions, £194; for supplementary report, 750 copies, £18; for lithography, woodcuts, etc., £126; for stationery, £13; for postage, 3 pence; for secretaries and treasurer, not including stenography, £36; total expenses, £502; balance in treasury, £201.

Opera Minora; a Collection of Essays, Articles, Lectures, and Addresses from 1866 to 1882 inclusive. By Edward C. Seguin, M.D. New York: G. P. Putnam's Sons. 1884.

The articles here collected make a large quarto volume of near seven hundred pages. The author modestly says that "the redeeming feature in the collection will perhaps be the series of observed facts faithfully recorded." The volume has more value than is measured by such an estimate. The articles touch upon nearly the whole field of neurology, and nearly every one contains something of interest or practical value. Expositions of nervous physiology, contributions to neurological therapeutics, and original researches in pathology—especially of the spinal cord—form the leading features of a collection which does great credit both to the author and to American science.

New York and Brooklyn Formulary of Unofficinal Preparations. Published by a Joint Committee of Delegates from the College of Pharmacy of the City of New York, the New York German Apothecaries' Society, and the Kings County Pharmaceutical Society. New York: Publication Office, College of Pharmacy Building.

The great and increasing number of preparations of so-called elegant pharmacy is as annoying and perplexing to the physician as to the pharmacist, and any measures looking toward a reduction of the number are to be welcomed. A committee of delegates from three pharmaceutical societies of this city and Brooklyn have prepared a number of formulæ for the compounding of the more commonly used elixirs, emulsions, and syrups, and it is hoped that the physicians of the two cities will order these preparations only, and not designate on their prescriptions those of any particular house. Such a result is certainly to be desired, and perhaps may be obtained through the wide distribution of this formulary. But the druggists will have to rise betimes in the morning to score a point against the representatives of the manufacturing firms with their smooth tongues and seductive ways. If they succeed in driving these gentlemen from the field they will have earned the gratitude of the entire profession, and will no doubt receive their reward.

Reports of Societies.

MICHIGAN STATE MEDICAL SOCIETY.

Nineteenth Annual Session held at Grand Rapids, June 11 and 12, 1884.

(Continued from No. 24, p. 671.)

In report of the first day's proceedings, by telegraph, of this meeting, abstracts of papers were omitted.

Dr. Donald Maclean, Chairman of the Committee on Surgery, read an interesting report of four cases which had come under his care at the University Hospital clinic. The first case was a lady who presented symptoms of

SYPHILITIC PERIOSTITIS,

but who gave none of the early symptoms or any history of any syphilis either in her own person or that of her husband. The diagnosis seemed to rest between a malignant affection and syphilitic affection. The doctor gave her the benefit of the doubt, put her on large doses of iodide of potassium, and she made a rapid and full recovery.

Some time after she came to the clinic again and presented her little son, about four years of age. The little fellow was bow-legged, and had exostosis of the upper end of the tibia. This patient was put on iodide of potassium and is now reported as quite recovered. The third case was one of

NECROSIS OF THE LOWER END OF THE FEMUR.

In attempting to remove a large piece of necrosed bone with the bone forceps

THE POPLITEAL ARTERY WAS TORN ACROSS.

The hemorrhage was arrested by pressure with the fingers; the necrosed bone was removed and the popliteal artery cut down upon and ligated above and below the site of the injury. The patient did well and made an excellent recovery.

The fourth case was a man of twenty-eight, who in jumping from a train of cars in motion received an injury on the elbow. The arm was firmly anchylosed at the elbow and it was thought best to resect the elbow-joint. A straight incision was made along the back of the arm and when the parts were brought to view it was found that the

RADIUS AND ULNA WERE DISLOCATED BACKWARD AND SOLIDLY ANCHYLOSED

to each other and to the humerus. About one inch was taken off from the humerus, and about an inch from the ulna and radius. The patient made an excellent recovery and has regained motion at the elbow to a large degree—that of supination and pronation. This case is typical of about twenty others which the professor has operated upon at the hospital clinic.

Dr. Charles J. Lundy's paper elicited considerable interest. Dr. Lundy said that within a few years the resources of the aural surgeon had been greatly increased, both by the introduction of new therapeutic agents and by the use of old ones in a new way. In appropriate cases the

SO-CALLED DRY TREATMENT OF CHRONIC SUPPURATIVE OTITIS MEDIA

had proven highly beneficial. All knew that the disease was attended with danger, and many had seen examples of cases, and necrosis of the temporal bone, mastoid abscess, meningitis, cerebral abscess, or death, which occurred as the result of neglected suppurative otitis media. Therefore any system of aural therapeutics which the better enabled us to control and cure this affection was a great boon. Before beginning the use of powders, all remediable complications must be removed. If aural polypus or granulations be present they must be removed or destroyed, and so it was also with removable pieces of necrosed bone, in the mastoid or else-

where. The advantages which the dry treatment of chronic suppurative otitis media seemed to offer were: 1, the constant medication of the parts; 2, the thorough and continuous disinfection of the ear as well as the destruction of micro-organisms; 3, the absorption of the discharges and protection from their irritating properties; 4, protection from atmospheric influences. Some space was devoted to illustration of these points, and while it was not fully settled as to which of these was the most important advantage arising from the use of dry powders, a majority conceded that the destruction of the micro-organisms and the protection from atmospheric influences were the strong arguments in favor of the dry treatment. It could not be claimed that powders should be used to the exclusion of remedies in other forms, and they were counter-indicated at times. In certain cases they proved a failure, and sometimes did harm instead of good. While no definite plan could be laid down for the management of individual cases, yet some rules could be formulated for our guidance in a general way.

The so-called dry treatment would seem to be contra-indicated under the following circumstances: First, when the discharge is so profuse that the powder becomes supersaturated before it has had time to exert any beneficial influence; second, when granulations or polypi exist the dry treatment should not be employed until these bodies have been destroyed or removed, although powdered boracic acid would cause absorption or destruction of these in a few cases; third, when the disease is complicated by caries or necrosis of the temporal bone; fourth, when mastoid abscess is present or suspected; fifth, when there is good reason to suspect the presence of meningeal or cerebral complications. The remedies which might be used were numerous but the author had confined himself to few. Wyeth's pure boracic acid was free from irritating properties and a favorable remedy with him. Boracic acid, one part with seven parts of resorcin, formed a valuable combination. Bismuth and perchloride of mercury he sometimes used, especially if eczema of the auditory canal existed. Astringents could be combined with the boracic acid if desired. It was of great importance to cleanse the ear thoroughly before using the powders. After the lapse of one, two, or three days, when the powder becomes moist, it should be removed, and the ear filled with fresh powder. Cases were reported showing some very remarkable cures from the use of remedies in dry form, especially from boracic acid. A paper on

EXPERT TESTIMONY AND COMPENSATION,

from the pen of Dr. Samuel P. Duffield was a well-digested, carefully written essay.

Starting with the German motto from Lessing, *Wer viel weiss hat viel zu sorgin* ("He who knows much has much to care for"), he claimed that Lord Bacon uttered a truth when he said, "The greatest trust between man and man was the trust of giving counsel," and if, said the essayist, he were in our profession and called to the witness-stand, in Wayne County especially, he would have probably added, "and no counsellors are so poorly paid." This province of giving counsel cannot be reserved by the legal fraternity alone, they are not the only Gamaliels at whose feet the young Sauls of Tarsus must learn wisdom. A lawyer can *cram*, but he cannot *counsel* on *our* specialties. Physicians as counsellors in their departments of knowledge are denominated "experts." So far they seem to have been expert in telling all they know and *not expert* at getting *paid* for it.

He described the ancient law, which was intended to prevent the perfidy of advocates, and showed how during the time of Claudius it was so modified that advocates, were permitted to receive any sum up to 10,000 sesterces, or about $400, and thus was paved the way for that amendment under Claudius which recognized the fact that professional services have created something more than imperfect obligation on the part of the recipient, and entitled the practitioner to his "quiddam honorarium," even through the intervention of the magistrate. Such was the high standard affixed to the exercise of a liberal profession among the most polished people of antiquity. The author of the paper gave two sets of cases, viz.: 1, cases favoring extra compensation; 2, cases denying the right to extra compensation—reference being had to Buchman *vs.* State of Indiana, 59 Ind., 1; U. S. *vs.* Howe, 12 Central Law Journal, 193; and for American cases denying the right of compensation reference was had to 53 Alabama, 389, before the Supreme Court of Alabama, *ex parte* Dement.

Dr. D. also reviewed the article by Rasselle Johnson which appears in the June number of the *North American Review*, showing his fallacious definition of the word witness in that article, is not consistent, "for the expert is not testifying of facts," but is acting as an interpreter by making legible that which was written in blood, or paint, or other stain upon the clothing. He stands as Daniel at Belshazzar's feast, interpreting the mysterious, and to the mass the unknown characters which shine out in the testimony, but which *cannot* be interpreted by the jury. Called by opposing counsel rather than by the judge, answering alternately yes or no to contradictory hypothetical questions ingeniously based on *selected* facts in testimony, and so with show of science, falsely so called, leaving the jury more befogged than ever. *True science* asks a different definition from this, and indignantly appeals from such data.

It can never be reached without distinct and honest co-operation between legal and medical experts. The bar must reach forth an *honest* hand to the physician and he must conscientiously respond; both must be willing searchers for that gem which is the crystallization of years of medical experience and science realizing the truth of Goethe's words, *Die weisheit ist nur in der warheit* ("Wisdom is only in truth").

President Dr. A. F. Whelan, of Hillsdale, called Vice-President H. Tupper to the chair, and read his

ANNUAL ADDRESS.

He reviewed the history and progress of medicine, and said it had done more to break up dark faiths by building up the minds of the people, and despite the opposition and hindrances that have always been in the way it will be triumphant. He closed with an appropriate tribute to the memory of Drs. Jas. H. Jerome and Wm. Brownell, deceased.

Dr. T. A. McGraw, of Detroit, read a paper of great practical value on

DIAGNOSIS OF TUMORS.

He thought that all abnormal growths were the result of irritation or a slow inflammatory process. Hypertrophy was the result of increased nutritive action and is not a neoplasm. He discussed quite extensively the nature and pathology of tumors. He had made a thorough study of cystic tumors of the breast, and thought that they should be removed entirely as soon as discovered, and if they showed a tendency to return the entire breast should be removed. He thought that all tumors had better be taken out promptly and thoroughly. He had often known apparently innocent growths to take on a malignant action from local irritation. He believed that warts and moles were often irritated until they became malignant. He thought that the better way to remove a tumor was to use the knife.

Dr. A. B. Palmer, of the State University, read a paper on

PROSTATIC HYPERTROPHY AND URINARY OBSTRUCTION, ITS TREATMENT WITHOUT CATHETERISM,

which, from the simplicity and to many the novelty of the method, attracted particular attention.

After referring to the frequency of prostatic enlargement in advanced life and to the occurrence of what

Spiemlart calls the "catheter period," which means a period of such obstruction to the passage of the urine in which the bladder is not completely emptied, an irritation of the urinary organs of a somewhat decided character occurs, and which also implies that from that time onward the catheter must be a constant companion and one likely to be brought into frequent use; and after further referring to the great unpleasantness and not infrequent dangers of its introduction — the "catheter fever" and the still more frequent shock—the method of procedure in the management of cases was described as follows: "The urethra is to be filled with urine as in an effort at micturition. The penis is then grasped by the hand of the patient and the urethra is pressed upon near the glands or in some part of its course sufficient to introduce the flow; and then by straining, as in an attempt to forcibly empty the bladder, the distention of the urethra is produced. This distending pressure is gentle, steady, diffused, and painless, and may be applied and sustained at will, and in a majority of cases, if daily repeated for a time and afterward occasionally, and if it is done thoroughly, and especially if commenced at an early period of the obstruction, it will overcome this form of stricture effectually and without irritation or danger."

A case as a specimen of many others was given in detail as illustrating the efficacy of the measure.

The paper concluded with the statement that from sufficient experience the efficacy and value of this method had been demonstrated and it was strongly commended to the attention of the profession.

In compliance with a resolution previously made by Dr. Pratt and adopted by the Society, the President appointed a committee to nominate officers for the ensuing year, except President. The committee was composed of Drs. William Brodie, H. McColl, S. H. Clizbee, G. K. Johnson, and E. P. Christian.

Dr. G. K. Johnson's paper was on motion, made the special order for 9 A.M. next day.

Dr. E. L. Shurly as one of a committee appointed by the U. S. Climatological Association to collect data of

NATURAL CAUSES PREDISPOSING TO PHTHISIS PULMONALIS,

appealed to the members present and the profession throughout the State to assist him by reporting to him on blank cards which he distributed to those present.

As adjournment would take place before all the papers offered could be read, on motion of Dr. Ward, authors of papers were allowed to read them by title, and when so read they were referred to the Publication Committee.

STERILITY IN WOMEN.

Dr. J. H. Carstens, of Detroit, read a paper on "Sterility in Women," calling attention to the frequency of the disease and the great importance of this condition to the State, and especially to the individual so afflicted. That in order to understand the cause and cure of sterility it was best to consider the essentials of pregnancy. Then we come to the conclusion, that sterility can be cured by absence of disease of ovaries, Fallopian tubes, displacements of uterus, strictures and occlusions of uterine canal or of the vagina. These were the causes in women, but the husband was sometimes to blame and should never be neglected. Especially should we be guarded in our prognosis and not promise a cure, as we never could be positive that pregnancy would occur, even after the cure of the diseases which often cause sterility.

SECOND DAY—MORNING SESSION.

Meeting called to order by the President. Calling of the roll and reading of the minutes was dispensed with.

Dr. Breakey, as chairman of the Committee on Necrology, rendered a verbal report, and asked further time to complete his written report and refer the same to the Committee on Publication. Granted.

Report of a case of

PERINEPHRITIC ABSCESS,

with remarks, by Dr. George K. Johnson, of Grand Rapids, was next called for and read. This was a case occurring in a man twenty-two years of age, whose illness was marked by symptoms seen in typhoid fever, which symptoms partially abated. Soon, however, an indefinite ailment, characterized by weakness, want of appetite, loss of flesh, feeble pulse, cachectic fever, and pain in left iliac and lumbar region, led him to again consult the doctor. In a word there was present the group of phenomena which signalized hectic or pyogenesis. Pain in the left costo-iliac space had come on and was increased by pressure. A feeling of weight in left flank and left upper abdomen was complained of, but no pain in genital tract or groin. Urine voided frequently, loaded with pus, but without blood, mucus, or casts. Left half of abdomen distended with fluctuating tumor, easily traced. Hypodermic needle passed into the tumor withdrew a drachm of pus and confirmed the diagnosis. The body forces fast waning and danger that the cyst would rupture and pour its contents into the cavity of the abdomen, the doctor decided to at once aspirate the tumor. Passing the needle at the external margin of left rectus, two inches below the level of the umbilicus, he removed eighty-four ounces of pus. Within a few hours relief came, fever left, and pain vanished. On the second day the temperature of the patient reached 100° F. in the morning and 104° F. in the evening, and on the fourth day the temperature was 99½° F. in the morning, and 104½° F. in the evening, when it reached its climax, the patient having, though restless, suffered no pain or swelling of the parts since aspiration. Six days after the aspiration some fulness appeared over the site of the tumor, and after a few days there was found to be considerable reaccumulation of pus. But the discharge by the urinary conduits was so free that no further accumulation took place and all tumefaction slowly but steadily disappeared. Three months after aspiration the patient seemed entirely well, appetite, strength, flesh, and spirits were fully restored. The urine was normal, and all traces of the tumor was gone.

The author closed his paper by a somewhat comprehensive and very instructive review of the somewhat meagre literature of the class of cases to which the one reported was typical, gave a careful history of the pathology and course of the disease, calling attention to important points in its diagnosis, so essential to the practitioner, who is often betogged for want of proper description by authors of the symptoms and signs of probable and possible value in localizing and diagnosing perinephritis and perinephritic abscess.

Dr. E. P. Christian read a paper on "Placenta Previa," which was referred to the Publication Committee.

OFFICERS FOR THE ENSUING YEAR.

The Committee on Nominations rendered their report recommending officers for the ensuing year as follows: *Vice-Presidents*—J. Perkins, Owasso; J. M. Cook, Muskegon; Gordon Chittock, Jackson; Case Brumme, Detroit; *Secretary*—Geo. E. Ranney, Lansing; *Treasurer*—A. R. Smart, Hudson; *Judicial Council*—F. K. Owen, Ypsilanti; C. V. Tyler, Bay City; H. M. Clou, Lapeer; *Delegates to American Medical Association*—Wm. Brodie, Detroit; H. B. Baker, Lansing; J. H. Bennett, Coldwater; J. B. Book, Detroit; W. F. Breakey, Ann Arbor; C. Brumme, Detroit; J. H. Carsten, Detroit; S. H. Clizbee, Coldwater; L. Connor, Detroit; E. S. Dunstan, Ann Arbor; S. P. Duffield, Dearborn; S. S. French, Battle Creek; A. D. Hogadorne, Lansing; H. O. Hitchcock, Kalamazoo; G. K. Johnson, Grand Rapids; D. Maclean, Detroit; H. M. Cole, Lapeer; F. M. Oakley, Ypsilanti; F. K. Owen, Ypsilanti; A. B. Palmer, Ann Arbor; F. Pratt, Kalamazoo; G. E. Ranney, Lansing; W. F. Sigler,

Pinkney; H. A. Shank, Lansing; E. Snow, Dearborn; C. F. Southworth, Monroe; T. H. Tupper, Bay City; C. V. Tyler, Bay City; D. C. Wade, Holly; A. F. Whelan, Hillsdale; Chas. Shepard, Grand Rapids.

The report of the committee was adopted.

The Society next proceeded to ballot for President, with the following result: Whole number of votes cast 196, of which Donald Maclean received 126; S. S. French, 63; scattering, 6.

Dr. Maclean was thereupon declared elected.

The usual votes of thanks for the many courtesies extended by the physicians and citizens of Grand Rapids and to the retiring officers were then passed.

Dr. Miles, of Port Huron, extended an invitation to the Society to hold its next annual meeting at Port Huron. Carried.

Dr. A. W. Nichols, of Greenville, read an interesting, practical, instructive paper on "Nasal Catarrh," which was referred to Committee on Publication.

GRANULATED LIDS.

Dr. Eugene Smith, of Detroit, read a paper on "Granulated Lids" and related a case in which he had used jequirity with good effect. He uses a three per cent. solution, and applies it two or three times a day for three or four days, and then follows with boracic acid. He thinks this remedy is well adapted to old chronic cases where there is no purulent secretion.

MISCELLANEOUS BUSINESS.

A paper by Dr. R. J. Kirkland on "Chronic Catarrhal Otitis," one by Dr. A. R. Smart on "Therapeutics of Dysmenorrhœa," one by Dr. D. W. C. Wade on "Uterine Displacements," were all interesting, able papers, and were referred to the Committee on Publication.

Over two hundred physicians were in attendance, upward of eighty of whom were elected members at this meeting.

The Society transacted considerable miscellaneous business pertaining to local and personal matters, and adjourned till the second Wednesday of June, 1885.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

CONFERENCES ON HEALTH — DOMESTIC SANITARY ARRANGEMENTS OF THE METROPOLITAN POOR—DOMESTIC SANITATION OF RURAL DISTRICTS—INDUSTRIAL DISEASES—INFECTIOUS DISEASES—DISPOSAL OF THE DEAD.

London, June 14, 1884.

What may be termed the Health Congress began on Monday last, June 9th. This consists of a series of conferences organized by a joint-committee of the following bodies: Society of Medical Officers of Health, Sanitary Institute of Great Britain, Parkes Museum of Hygiene.

The meetings have been thrown open to all visitors to the Health Exhibition. No one will be sanguine enough to believe that a tithe of the sightseers who visit the Exhibition will find their way into the conference room, and patiently listen to the reading of the papers; but the chief end and aim of the meetings will be gained if, through the publicity given to them, the public gets a more intimate acquaintance with, and places a deeper trust in, the science and practice of hygiene. Many of the subjects discussed, and propositions brought forward, have long been familiar to sanitarians, but to ordinary medical practitioners, who are so largely occupied in the treatment of disease, they are probably less well-known. In any case the threshing out again of health topics cannot fail to be beneficial.

The ball was opened on Monday by the reading of a paper on "Domestic Sanitary Arrangements of the Metropolitan Poor," by Dr. Tripe. Dr. Tripe is a well-known sanitarian, and as the medical officer of health to a populous parish in the East end of London, is well qualified to speak on the subject from actual observation. He remarked that the chief defects arose from want of a proper water-supply. This, of course, led to defective drainage and escape of sewer-gas from unflushed drains and dried-up traps. Unemptied dust-bins were also great nuisances.

Mr. Ernest Turner, who is an architect, and consequently approached the subject from an architectural standpoint, followed with a paper on "The Improvement of the Sanitary Arrangements of Metropolitan Houses." It is satisfactory to find that a few architects are beginning the study of hygiene. A whole number of The Medical Record could easily be filled with accounts of unsanitary arrangements perpetrated by architects in the past. I could testify to a good many from personal observation. It is not all the fault of the "jerry-builders." A West end mansion I frequently pass had the soil-pipe imbedded in the wall of the dining-room, and constructed of such thin lead that it gave way and caused a leakage of sewage through the wall, which continued for some time. When the cause was at last discovered, the owner determined to do, what in fact should have been done at first, viz., place all the drain-pipes outside the building.

On Tuesday the conference was continued by the reading of a paper by Dr. George Wilson on "Domestic Sanitation of Rural Districts." Dr. Wilson quoted the report of the agricultural commission of 1867, which showed that one-third of the rural homes of England were unfit to be used as dwellings, and that therefore 700,000 hovels ought to be pulled down. In many villages he knew himself half the cottages contained only two sleeping-rooms, and about ten per cent. only one, and his district (Warwickshire) was considered by the commission better than many. He said the poverty of the owners and the low wages earned by the occupiers were obstacles to improvement. Dr. Wilson advocated for rural districts the adoption of the "pail system" or else ash-pit closets.

Mr. Boulnois, civil engineer, then read a paper on "Sanitary Houses for the Working Classes in Urban Districts." He condemned the erection of huge blocks, also basement rooms. Flat roofs were good for gardens or drying grounds, also for escape in case of fire. He urged the advantages of a constant water-supply.

On Wednesday, a paper on "Industrial Diseases" was read by Dr. Bristowe, F.R.S., Physician to St. Thomas' Hospital, and Medical Officer of Health for Camberwell. The causation and prevention of industrial diseases is a subject to which sanitarians have devoted a good deal of attention of late years, and Dr. Bristowe made the most of his subject in the limited time allotted him, dwelling in succession on the chief diseases caused or aggravated by different trades, and the modes of prevention that may be adopted.

On Thursday an interesting paper was read by Dr. Thursfield on "The Spread of Infectious Diseases through the agency of Milk." Dr. Thursfield remarked on the great increase in the consumption of cow's milk both by adults and infants—in the latter case, through the unfortunate increase in the number of women physically incompetent for lactation. It was presumable that in many cases of disease from milk, the source had not been suspected, but making allowance for doubtful cases, he thought it might be accepted as a fact that enteric and scarlet fevers had been repeatedly disseminated by milk, and there was also very strong evidence as to the spread of diphtheria through the same agency. He considered

that the boiling of milk practically conferred immunity from infection. Dr. Thursfield enumerated the restrictions it was desirable to place on the sale of milk, and observed that an urban sanitary authority should have the power to stop the sale of milk sent from any particular farm, pending investigations, but that there should be liability for compensation if the step proved unnecessary. In the discussion which followed the reading of the paper, Dr. De Chaumont, professor of hygiene at Netley, assented to the views expressed as to the frequent conveyance of infectious diseases by milk, but stated that the views received here did not find acceptance abroad, and that some of his French and German friends looked on the whole thing as a gigantic joke. Dr. Corfield read a paper on "The Spread of Infectious Diseases through other Agencies than Milk."

On Friday the "Notification of Infectious Diseases" was discussed in two papers by Drs. Alfred Hill and Alfred Carpenter, respectively. Dr. Hill urged its importance as the only means by which news of an epidemic could be obtained, and was of opinion that it should be compulsory on all medical men to notify. Dr. Carpenter considered notification a moral duty to the State, and that it was the duty of the State to enforce it. The chairman, Earl Fortescue, spoke of the danger of interfering with either personal liberty or the rights of property, and in summing up the discussion which followed the reading of the papers, as on previous days, said he thought a case had been made out for notification, but it appeared to him that the duty should be laid on the householder rather than on the doctor. With this opinion the bulk of the profession will concur. It is mainly the professed sanitarians who wish to compel the doctor to notify. Ordinary practitioners are against it. It would no doubt be a great lightening of the labors of medical officers of health, but at the expense of an increase of worry and responsibility to the actual practitioners. It is significant that out of about 120 medical men at Brighton, 100 have petitioned against notification being made compulsory in that town.

The subject for to-day is the "Disposal of the Dead," on which Mr. Wynter Blyth, medical officer of health for Marylebone, will read a paper. Mr. Eassie will follow with one on "Cremation," of which he is an advocate.

SUCCESSFUL LOCAL APPLICATION OF ETHER TO MUCOUS MEMBRANE OF BLADDER FOR NEURALGIA OF THAT ORGAN.

To the Editor of The Medical Record.

Sir: Apropos of etherization by the rectum, permit me to mention another channel through which I have introduced ether into the economy. In two cases of severe and obstinate neuralgia of the bladder, which had resisted morphine, belladonna, hyoscyamus, fomentations, in fact, almost everything recommended in the treatment of this distressing affection, I injected into the bladder ether, gtt. x., in water, ʒ ij. Any detailed account of the cases your valuable time and space will not permit and, therefore, I can only add that *within one minute* the ether was perceptible in the breath in both instances, and within five minutes' time there was perfect relief from pain which had been previously most severe. The conclusions were verified a number of times.

The mucous coat of the bladder being non-absorbing, as some authorities claim, how could the ether pass so quickly into the circulation? Has ether ever been used in this manner before and what have been the results. I have been unable to find a precedent for its use in the literature upon the subject.

Very respectfully,

John Parmenter, M.D.

192 Georgia Street, Buffalo.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from June 22 to June 28, 1884.

Clements, Bennett A., Major and Surgeon. Ordered to relieve Major Jos. P. Wright, Surgeon, of his duties as Attending Surgeon at the Leavenworth Military Prison, Fort Leavenworth, Kansas. Major Wright, on being relieved, ordered to report to the Commanding General Department of Texas, for assignment to duty. S. O. 144, par. 7, A. G. O., June 21, 1884.

Dickson, John M., Captain and Assistant Surgeon, assigned to duty as Post Surgeon, Alcatraz Island, California. S. O. 71, par. 3, Headquarters Department of California, June 19, 1884.

Girard, A. C., Captain and Assistant Surgeon. Granted leave of absence for six months, with permission to go beyond sea. S. O. 148, par. 11, A. G. O., June 26, 1884.

Official List of Changes in the Medical Corps of the U. S. Navy, during the week ending June 28, 1884.

Knight, J. S., Surgeon. Placed on Retired List.

Whiting, R., Passed Assistant Surgeon. Detached from U. S. S. Vermont, and ordered to Marine Rendezvous, New York.

Babin, H. J., Surgeon. Detached from Marine Rendezvous, New York, and ordered to U. S. S. Minnesota.

Wells, H. M., Surgeon. Ordered for examination preliminary to promotion.

Lumsden, G. P., Passed Assistant Surgeon. Detached from U. S. S. Pensacola and placed on waiting orders.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending June 28, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
June 21, 1884	4	11	56	4	130	34	0	0
June 28, 1884	5	16	56	6	186	35	0	0
Deaths.								
June 21, 1884	0	5	12	4	29	15	0	0
June 28, 1884	2	5	17	5	29	15	0	0

The Validity of a Life Insurance Policy.—An important insurance decision has recently been rendered in the United States Supreme Court, sustaining the validity of a policy although statements were made by the insured which were not absolutely true. He was asked among other questions whether he ever had had asthma, scrofula, or consumption, and he answered no. After his death it was found that he had one of these diseases in an incipient form at the time of making this answer, but was unaware of it himself. This condition of the case was held to avoid the policy by the trial court and an appeal was taken from the decision to the Supreme Court, where it has just now been reversed. The latter court stated that if the insured had no reason to believe that he was afflicted with the disease at the time of making the application, he should not be precluded from the advantages of the policy.

Actinomycosis.—At the last meeting of the London Pathological Society, Mr. Frederick Treves gave a further account of his supposed case of actinomycosis. The disease began two years ago after erysipelas. It commenced with a swelling over the lower jaw, on the left side, which increased and was excised. The wound would not heal and an ulcer remained. The glands at the back of the neck then enlarged, and nodules appeared over the chest, about thirty in all. As each nodule appeared under the skin it developed a pustule; ulceration and fungation followed. Mr. Treves said that although no fungi were found, and no communication with animals traceable, he was inclined to call it actinomycosis, as Ponfick's description was so accurately realized. Mr. Treves removed several of the nodules and the patient seemed to do well, but a second operation was succeeded by great weakness and the patient died in a month. Secondary deposits, in the form of round yellowish nodules, were found in the lung, liver, spleen, and kidney. Mr. Watson Cheyne had examined the organs, but had been unable to discover any micro-organisms or cultivate any micro-parasites. The structure resembled alveolar sarcoma. Clusters of cells were arranged in a plexiform manner with some connective tissue. Mr. Treves remarked that the suppuration of each nodule, soon after its appearance, was remarkable, and so was the protracted character of the malady. He considered that the diagnosis at times lay between scrofula, cancer, farcy, and actinomycosis.

Mr. Hulke, who had seen the patient during life, thought the case resembled farcy.

Mr. Watson Cheyne remarked that as the farcy organism could be easily cultivated, and cultivation experiments had produced negative results, farcy might be excluded. He thought the case was one of carcinoma.

Mr. Treves remarked that the case was slower than one of farcy.

Contagious Diseases Acts.—The total repeal of the Contagious Diseases Acts is likely to be soon accomplished. Since the adverse vote of the House of Commons last year the action of the compulsory clauses has been suspended, and the Secretary for War now proposes to bring in a bill for the abolition of the remaining provisions of the acts. There is good evidence that venereal affections have increased during the last year, and should the new bill pass, a further increase may be expected. Public opinion, though, will not support the acts, and the accounts of how the French system works have done a great deal to disgust every one with all systems of compulsion.

Report of a Case of Multiple Pregnancy; Cæsarean Section.—The following interesting case was read before the Montgomery County, O., Medical Society by Dr. C. H. Humphreys, of Dayton, O., and created quite a sensation: "The rarity of Cæsarean section always lends interest to every new case. I was recently the accoucheur on an occasion requiring its performance, and beg leave, therefore, briefly to report it. On a Sunday evening, some three weeks ago, a gentleman entered my office, and with some hesitation requested my attendance upon the subject of this sketch in confinement, who was a rather handsome young primipara, unmarried, a native of Massachusetts, and since last summer a resident of this city. Labor began the night previous, and about 9 A.M. a living fœtus was born without assistance. The pains continued unabated, however, and toward evening it was decided medical aid should be called. Upon arrival I made a vaginal examination and diagnosed multiple pregnancy. As well as I could determine, the dystocia was caused by a transverse presentation. The patient showed much exhaustion and was constantly changing her position in bed. Version by external manipulation was fairly tried, but this procedure proved an entire failure. I did not think introduction of my hand within the uterus to perform version possible, and did not attempt it. Her condition contra-indicated such violence. At about 6 P.M., the patient's condition being unpromising, and it being evident that something must be done without delay, I determined in my dilemma to make at once Cæsarean section. Accordingly preparation was hastily made, and the patient placed on an operating table. She at first declined an anæsthetic, but finally consented to the use of ether, which acted well. Commencing near the umbilicus, I made an incision about three inches long in the median line and opened the abdominal cavity. The uterus presenting, it was incised to correspond. A dead fœtus with membranes ruptured lay transversely and was removed, the placenta separating with but little hemorrhage. Two others were removed with envelops entire, and each had separate placentæ. The umbilical cords were duly tied and cut, and efforts at resuscitation made, which finally were successful. The uterine wound was closed by the continued suture of fine silk. Some delay was caused by hemorrhage from the divided uterine vessels, which finally was arrested by hot water. The peritoneum was sponged clean and dry with carbolized warm water, and the incision closed by deep interrupted sutures of strong silk. No dressings were applied. Duration of operation, about thirty-five minutes. Before the question may be raised as to whether this was a justifiable operation, permit me to 'let the cat out,' and confess that this patient was only a cat! And I might also here venture that the result of my operation ought to vindicate our profession from the charge occasionally made against some of its members with derision by some evil-minded laymen, that 'he cannot doctor a cat!' I have only to add that pussy was carefully nursed by watchful little friends and made a speedy recovery. The abdominal sutures were removed a week afterward, and union was found to be complete. The kittens that were 'untimely ripped from their mother's womb' died of inanition within the week. The first-born yet survives, however."

The Dram-Shop Act not Applicable to Druggists in Illinois.—A section of what is called the Dram-Shop Act, passed not long since by the Illinois Legislature, provides for the filing of a bond for $3,000 by any sellers of intoxicating liquors, and it has been a question whether this applied to druggists who had permits to sell for medicinal, chemical, and sacramental purposes. A case of this sort was tried in Vermilion County, and it was held that druggists were bound by the provisions of the law like all other persons. An appeal was taken, however, from this decision, and the Supreme Court of Illinois has just reversed this decision, holding that druggists are exempt from the bond. It was also decided in the same case that where a village ordinance prohibits the sale or giving away of intoxicating liquors within the village limits, but allows druggists to sell for purely medicinal, chemical, and sacramental purposes, if there is no provision made for a written permit, that the ordinance itself is a permit to all the druggists in the village, and they will be protected in selling.

The Druggists and the Drug Appraisers.—Charges have been preferred against the Appraiser's Department of the Custom House in this city by a number of firms importing dye-stuffs, drugs, and chemicals, charging that they are hampered and injured in their business by the unjust discriminations of the officials. A memorial has been prepared and sent to Congress in which the importers say that charges of undervaluation are continually made against their invoices, which charges have been shown to be baseless, and that as a result they are injured in business and reputation. The memorial states "that while carrying on their said business, and in all respects, as they believe, complying with the laws, they are continually obstructed, hindered, delayed, and embarrassed in their efforts to get possession of their goods after they have passed into the hands of the customs authorities at this port, and that such delays and hindrances amount to a serious interference with business, causing much loss

and damage. . . . That it frequently happens that goods needed for speedy delivery are held for one, two, or three months, so that in many cases the importer is prevented from delivering to purchasers according to contract, and is often in this way subjected to heavy loss. That the undersigned have not only been subjected to the delays and annoyances aforesaid, but damaging reports of fraudulent undervaluations have been invented and circulated concerning persons in their trade and business; that such reports, though often indefinite and vague, amount to an imputation of fraud, and wrongfully and unjustly throw suspicion on the business and transactions of the undersigned and others, and that such charges are made by United States officers, and have appeared and been published in their official reports." The memorial concludes by requesting that an investigation be had into the whole matter, under the direction of Congress. The following firms are the signers of the document: W. M. Pickardt & Kuttroff, 98 Liberty Street; F. Bredt & Co., 26 Murray Street; Lutz & Morius, 15 Warren Street; J. C. Bloomfield & Co., 11 Dey Street; Leisel & Halbach; W. J. Matheson & Co., 20 Cedar Street; Geisenheimer & Co., 22 Liberty Street; E. Selbach & Co., 48 Cedar Street; Schulze, Berge & Koeck, and Baumig, Bissell & Co., 22 Dey Street. It is thought probable that an investigation will be ordered.

"A Good Generall Rule of Physyke."—Some one has hunted up from an old book called "Hundred Mery Talys" the following interesting prescription: "A certayn artificer in London there was, whyche was sore seke and coulde not well dysgest his meat. To whom a physicion cam to give hym councell, and sayd that he must vse to ete metis that be lyght of digestyon and small byrdys, as sparowes, swalowes, and specyally that byrd which is called a wagtayle, whose flessh is meruelouse lyght of digestyon, bycause that byrd is euer mouying and styrynge. The seke man, herynge the phesicion say so, answered hym and seyd: 'sir, yf that be the cause that those byrds be lyght of dygestyon, then I know a mete moch lyghter of dygestyon than other sparow, swallow, or wagtaile, and that is my wyues tong, for it is neuer in rest, but euer meuying and sterryng.' By this tale ye may lerne a good generall rule of physyke."

A French Compliment for Richmond.—A Dr. Bougarel, who states that he was for four years in charge of the pest-house in Richmond, Va., sends to *Le Concours Médical* a very pleasing account of the state of medical education in that city. There are, he says, one medical college and two hospitals, one for the blacks and one for the whites, but the medical students never set foot in the hospitals, gaining their practical knowledge in a college clinic. At the end of two years (the writer might have added of five or six months each) these young gentlemen start out armed with the diploma of doctor, written in Latin, with the Hippocratic oath printed on the back. Two of these doctors are assigned to service in the hospitals, and there, under the eye of the chief surgeon, they undertake the most hazardous operations. They do not appear to be very successful, however, for the veracious writer states that almost all the patients die, adding by way of explanation that "human life counts for less than nothing in America." Those who survive the operation are by no means out of the woods, for they are then turned over to the tender mercies of the nurses, who apply the dressings in a most elementary way without observing the least precautions. The doctors in the meanwhile are walking about town with their hands in their pockets. They do, however, as a matter of form, visit the wards once a day, sometimes in the morning, sometimes in the evening, as suits their convenience. But in Philadelphia, Dr. Bougarel continues, medical education is even more simple. The candidate begins by paying down twenty-five dollars, undergoes a very superficial examination, and leaves the college fortified with a diploma, in virtue of which he may henceforth assassinate with impunity those whom his attainments attract to him. The writer closes with the assurance that his readers may rely absolutely upon his statements, for he has cited only such facts as he has himself observed. Notwithstanding the outrageous exaggeration of Dr. Bougarel's letter, it must be confessed that his account rests upon some foundation of truth, at least of what was truth at the time of which he writes.

A New Method in Adherent Placenta.—Dr. W. W. Jaggard writes to the *Chicago Medical Journal*: "The New York Medical Record, May 17, 1884, alludes to a report in the *Clinique*, by Dr. J. Feld, of Kansas City, on 'A New Method in Adherent Placenta.' In six cases of adherent placenta, the life of the woman was saved by pumping cold water through the umbilical cord. Although The Record is in error in its denomination of the method as a new one, it deserves credit for calling attention to a very old and very excellent procedure. The injection of cold water into the umbilical vein in *post-partum* hemorrhage and adherent placenta was ably advocated and extensively practised by Mojon (1826), Kilian, and others. The umbilical vein is divided transversely, a tube or quill fastened securely in the proximal extremity, and cold water injected, slowly and carefully, into the placenta, by means of an ordinary syringe. The cold water, forcing its way into the placenta, distends that organ to twice its original volume, escaping through the lacerated utero-placental vessels, bathes the endometrium, and stimulates the uterus to powerful contractions, usually resulting in the total separation and spontaneous expulsion of the after-birth. Stoltz and Rombach (1855) have extolled most highly this measure, while Linéard (1875) claimed that the injection of 150 grammes of pure cold water into the umbilical vein was 'the best, most reliable, and least dangerous expedient in all cases of *post-partum* hemorrhage or adherent placenta.' At present this method is extensively practised in Germany, more particularly in Bavaria. Scanzoni, in Würzburg, practises this method exclusively."

Medicine and Medical Men in Denmark.—The coming meeting of the International Medical Congress, to be held in Copenhagen, makes Denmark just now a point of professional interest. The *Lancet* is publishing a series of letters relative to this question, from one of which we extract the following: "In proportion to the population of Denmark, the number of Danish medical men is large, as is the case in almost every country. In the city of Copenhagen, where the inhabitants number some two hundred and fifty thousand, there are more than three hundred and fifty doctors, of whom about two hundred and fifty are general practitioners, the remainder being mostly either young medical men in the hospitals or elderly gentlemen who have retired from practice. There is no difference made between surgeons and physicians, inasmuch as all have to pass the same examination at the University, and this gives the whole profession a uniformity which does not exist in England. With the exception of a few specialists and surgeons, the majority of medical men are general practitioners, and it is customary for each household to have its own doctor, who, in return for his services, receives a fixed annual fee varying in amount according to the means of the family. This arrangement is attended with its advantages and disadvantages, but is generally thought satisfactory to both parties concerned. It tends to make the incomes of the medical men more fixed and permanent, and it affords the patient the opportunity of calling in his doctor for what may be either serious or trifling complaints. As an illustration of this latter, there is a trustworthy story of an elderly lady sending for her doctor late at night because she was troubled in her mind as to whether it would be prudent for her to eat a baked apple the first thing in the morning. In Denmark medical men hardly ever attend normal deliveries. These cases are left entirely to midwives, who

have to attend a midwifery school at the Lying-in Hospital for the greater portion of a year, and then to pass an examination previous to being allowed to practise. Of late, however, there has been a movement in the medical profession in favor of general practitioners undertaking these cases, though as yet the movement has not met with much success. A change which would probably meet with most approval would be for educated ladies, qualified as midwives, to undertake these cases. At present their number is small. The social position of members of the Danish medical profession is almost the same as in England, excepting that there are very few who have large incomes from their practice. Fees, as in England, are here considered only a *pium désideratum*, and are as a rule much smaller. Consequently a man with an average income is only tolerably well off, but as wealth is more equally divided in Denmark than in England, a small income has not the same significance. While one meets with few millionaires, but few paupers are to be seen. One observes in the streets of Copenhagen nothing approaching the luxury in the outward appearance of life which prevails in England, but at the same time one does not encounter rags and misery, and such a thing as death from absolute starvation has hardly ever been heard of. The result of this financial equality is that money has not the same importance attached to it as in England, consequently that perpetual struggle to keep up appearances (an expression which does not exist in the Danish language) is unknown here, a man's education rather than his account at his banker's forming his passport into social circles. There exists a good understanding between the Danish medical profession and the general public. One very seldom hears of a medical man being judicially accused of faults in treatment, and a fine in such cases is almost unknown. Such a thing would be ruin to any practitioner, as his case would soon be public property in a small country like Denmark. There is, too, a decidedly good feeling among the members of the profession themselves, at least in Copenhagen. There are, however, very few medical societies and clubs, partly owing to the fact that clubs do not flourish in this country, and partly because medical men, being chiefly practitioners, have very little time to spend outside their homes. This is also the reason why there are comparatively few Danish medical authors."

A Fine Opening.—The following instructive announcement appeared in the columns of the *Wiener Medicinische Zeitung*. It may throw some light on the Austrian social system: "To Physicians: A young single medical doctor, who by means of matrimony, and the assuming of an important and lucrative dental practice, is inclined to found a very agreeable existence, is hereby given an opportunity. A yearly income of 10,000 guldens can be shown. The young lady concerned is the daughter of very respectable parents, seventeen years of age, beautiful, well-bred, and correspondingly educated. The father wishes to retire from business, and will deliver to the young doctor a dental practice, dwelling beautifully furnished, together with material, dental tools, and instruments to the value of 8,000 or 10,000 guldens entirely gratis. Dental knowledge is not necessary for the beginning, since this can be acquired in the course of a few months, under the instruction of the present possessor. Applicants address 'Zahnarzt,' care Editor *Allgem. Wiener Med. Zeitung*."

Cremation and Burial in London.—Cremation is regarded with but little favor by the London official mind. Two furnaces have already been built under the auspices of the Cremation Society, and as Mr. Justice Stephen has declared from the bench that the practice is not illegal, more are shortly to be constructed. But at South Kensington the cremationists have been refused a stall at the forthcoming Health Exhibition. The chairman of the Health Committee does not approve of it. May we live to see him cremated! (after death), says the *Pall Mall Gazette*. The latest reverse sustained by the votaries of "ashes" is the decisive negative given by Parliament to the Cremation bill. This bill proposed to regulate cremation and place it under proper restrictions, but the second reading was negatived by nearly two to one. Our present method of burial is insanitary in the manner usually adopted. Many of our metropolitan cemeteries are in the centre of crowded districts—even those of modern creation. Brompton Cemetery, for instance, is now surrounded by houses on all sides, and is the centre of a densely populated district. It needs no very lively imagination to picture the possible—nay, probable—effect upon the dwellers in the vicinity. It has been shown, too, by some very loathsome practical experiments, that under certain conditions the human body is not completely disintegrated and resolved into dust for a good many decades. About five or six years ago a very ancient city burying-ground, Bunhill Fields, the place where John Bunyan lies interred, was sold (!) to a well-known firm of London carriers, who obtained permission to build stables over it and remove such bodies as they found necessary, they engaging to re-inter them elsewhere. In sinking the piles whereon to erect their buildings, they came across and removed a large number of corpses. Decomposition had, of course, commenced, and the effluvia was overpowering, but some bodies were scarcely disintegrated at all and presented an almost fresh appearance. A large number of bodies were carried away as dug up; they were carried on men's backs, who were plied with brandy *ad libitum*. The details may be mentally realized without much description, and the danger to health is obvious. This affair was hushed up as much as possible, and I believe no notice of it appeared in the public press at the time. I have known other instances of graveyards being disturbed, to the danger of the living and the desecration of the dead. It is not long since it was proposed to asphalt over an East-end disused graveyard and then build on it. Nearly all our large railway lines run through one or more churchyards, and many public buildings in London have been literally founded on the tombs of our ancestors. The National Gallery is one. Some of these evils would doubtless be removed if "burning" became common, but it is plain that even from a scientific point of view it is not quite free from objection. It hides all trace of poison and other modes of violent death, and renders a subsequent "exhumation" impossible. It is legal now, and it is thus a pity the bill restricting its practice did not pass.

Treatment of Angeiomatous Growths.—Dr. H. O. Marcy writes in the *Archives of Pediatrics* for May, 1884, describing a method used by him for the removal of nævi. He states that he has for a considerable time employed in the treatment of a variety of vascular growths a suture which he calls "the shoemaker's stitch." The eye of the needle is placed near the point which is without cutting edges. Armed with the ligature the needle, which is set in a strong handle, is thrust deeply under and quite away from the vascular growth; emerged from the distal side the ligature is detached and the opposite end threaded, when it is withdrawn and again inserted purposely only a short distance from the first puncture, since it is important to include only a comparatively small portion of tissue. Thus the process is repeated, stitch after stitch, until the entire mass is enclosed and the fixation is completed by a single knot. In this way uniform and steady pressure can be attained and maintained as long as is desired. The purpose of the procedure is not to strangulate and cause necrosis of the tissue, but to constrict so as to reduce to the minimum the circulation and yet preserve its integrity. The author claims by this method the avoidance of the unsightly cicatrices sometimes resulting from the cure of angeiomatous growths.

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SOME REMARKS ON AFFECTIONS OF THE HEART.

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II.

VALVULITIS.

THE ordinary impression about valvular disease of the heart is that it is a morbid action which, once set on foot, marches steadily and resistlessly onward, the valve mischief getting worse and worse and consequently making further and further demands for compensatory hypertrophy until the system fails to meet the demand, and then the patient dies; and, what is more, that this is a comparatively speedy affair. Such possibly is correct from the point of view of the dead-house, and is borne out by my remembrance of the Pathological Institute of Vienna, but is very far from what experience of practice in England tells me. That such cases do occur from time to time may not be denied, and a marked instance came under my notice rather more than a year ago. The patient was an athletic man, about thirty, of good family history, who was playing cricket in September, 1882, and who died with valvular disease, both aortic and mitral, the latter the more pronounced, and effusion into every serous cavity, in the middle of January, 1883. Here the progress was terribly swift. I can also remember a case in my father's practice, where rheumatic fever was followed by mitral disease, and the patient, an elderly man, died with dropsy in about eighteen months from his first being taken ill. But I unhesitatingly deny that such cases are the rule, or even common; in fact, they are rare—in my experience.

This, indeed, is valvulitis as seen in the dead-house, and spoken of by pathologists; but it is not the valvulitis of those who live, crippled indeed, but still alive and often at work. The prognosis of valvular disease is very different now from what it was held to be among earlier observers. That cases running their course swiftly made the deepest impression on these pioneers is comprehensible enough. But there is, I rejoice to say, another side to the question, and that side will now be presented to the reader.

There are two forms of valvulitis which must be clearly differentiated from each other in order to comprehend the subject properly. There is (1) acute valvulitis; and (2) chronic valvulitis.

(1) *Acute valvulitis.*—This may be the result of rheumatic fever, to a lesser extent of scarlatina or other malady of early life, or it may be set up by violent effort, or be possibly rheumatic.

Here there is an inflammatory storm which passes over the serous lining of the interior of the heart. Beneath this inflamed serous membrane there is a development of connective-tissue corpuscles into the structures underneath the endocardium. In the valve-curtains, in the chordæ tendinæ, in the musculi papillares, there is a growth of soft young cells. The inflammatory storm passes away, but the soft young cells remain; and possessing, as they do, an inherent tendency to contract in no long time, they shrivel up, and then distortion and mutilation of the parts in which they exist follows. The valve-curtains are shrivelled, may be dragged down to the stumps of the musculi papillares by contraction of the tendinous cords; or they are fused together, and the mitral valve is converted into a fleshy cone with a perforation down it, extending into the left ventricle. Such is the ruin wrought in the mitral valve by this deforming process. In the aortic cusps there is shrivelling of the free edges, one or more being mutilated, and that more or less severely as the case may be. But once the mischief done, it remains, like the cicatrix of a burn, static and non-progressive. A certain damage is done to the valve-curtains which cannot be undone, and which, as we saw in the preceding article, is compensated (so far as the powers of the system will permit) by a proportionate growth of the wall of the muscular chamber behind the lesion.

This is valvular disease of the heart, as it has presented itself clinically in my experience. As a malady of childhood it is infinitely commoner in little girls than little boys. Some die of dropsy about puberty, others live on. In one instance I have personally watched the case from about the age of eight till the girl is now twenty-six years old, a village schoolmistress, who gets through her duties without discomfort, but is short of breath on effort, as dancing, and who, when out of health, is apt to have some œdema about her ankles. In another case a peasant had rheumatic fever under my father, with mitral regurgitation, about twenty-eight years ago. He suffered at times from severe pulmonary congestion and spat blood, and was once, indeed, gravely ill under my care eighteen years ago. At that time he had to work for a living, but, fortunately for him, he got some money left him, which enabled him to live without toil, and since then he has never been seriously ill, only scant of breath. He is a hale, cheerful old man. He writes me at the present time: "I don't think I suffer so much from my heart as I did some years ago, but my breathing don't improve with old age." In a third case, that of a well-known authoress, she made severe efforts about fourteen years ago which resulted in acute valvulitis, leaving behind it a distinct mitral regurgitation, which makes itself felt only on effort. While she is at her desk she is well. She is married and has had children, but her literary work goes on.

So much for mitral cases. A distinguished artist has had aortic regurgitation for ten years. The lesion is a moderate one and the ventricular enlargement is not immense; he leads a quiet life, and is not measurably worse during the last six years. Some time ago a patient came to me for a malady in no way connected with his heart, who had distinct aortic regurgitation. It was a small lesion, the hypertrophy was not great, and he had worked hard as a solicitor all the time since it was set on foot, seventeen years previously. A doctor-patient of mine had a considerable aortic regurgitation, dating back to the time when he was a medical student under the famous Stokes, of Dublin, and who for over thirty years had worked hard in practice—often, indeed, being at death's door—but in whom the valve lesion was as static as the Dead Sea. Such are some of the aortic cases which have come under my notice. Of aortic obstructions it is unnecessary to speak; they very commonly run on for years, into the teens, indeed, in several cases known to me. This is the other side of the question—the clinical as compared to the dead-house aspect!

(2) *Chronic valvulitis.*—This is a totally different malady. It is a slow progressive disease as a rule, sometimes not very slow. It is otherwise known as sclerosing endocarditis. It consists of a parenchymatous inflammation, or cell-growth into the valve-curtains, and earthy salts may be deposited in the neoplasm when the condition spoken of as ossification of the valves is found. At other times atheromatous tubercles are found springing from the surface of the affected valves. Here there is, speaking broadly, usually an hypertrophied ventricle and hard arteries, with firm, incompressible pulse and a loud aortic second sound. In other words there is "the gouty heart." There is a high blood-pressure in the arteries, the ventricle overcomes this by hypertrophic growth, and by the powerful contraction of the ventricle the mitral valves are closed violently and so become chronically inflamed, or the aortic cusps undergo strain from the powerful aortic recoil, and a cell-growth is instituted in them. This form of valvulitis is essentially progressive, though the rate of progress is by no means the same in each case. The muscular changes which have preceded the valvulitis must be entertained in these cases, as well as what may have followed. A number of such cases have passed under my observation, from the pre-murmuric stage of accentuation of the aortic second sound to the gradual development of an unmistakable murmur, and the other evidences of a valvular lesion. In one case death followed within eighteen months of the time when no murmur was to be heard, and was due to aortic valvulitis. The course is usually not so swift. For four or five years a number of such cases have been under observation, but all are marching to the grave at a measurable rate. Mitral valvulitis in the gouty heart does not, I am inclined to think, progress so quickly as is the case with aortic valvulitis, at least usually. In one case, an old medical man over ninety, there was mitral stenosis which ran a course of about three years, so far as is known, accompanied by severe angina pectoris.

There is, then, a totally different prognosis, as there is a totally different pathological action at work, in cases of progressive valvulitis to what there is with the static injury left by an acute endocardial inflammation. And it is therefore a matter of the greatest moment to discriminate which affection it is before one in any given case.

Then there is true gouty inflammation of the valves of the heart, well described long ago by James Wardrop. This is usually the progressive valvulitis just described, but cases do crop up where the process is rather that of the acute articular gout followed by a period of quiescence. Of this last I have not had sufficient experience to speak very confidently.

Of ulcerative endocarditis my experience is limited. There is a persistent high temperature with the development of a murmur ; and the case runs its course with painful celerity.

These two last forms will be put aside in the following remarks, which are confined to the usual forms of valvulitis commonly encountered in practice, viz.: the static injury, and the progressive or sclerosing valvulitis.

Having determined from the murmur the seat of the valvular lesion, according to the rules laid down in our text-books, it is not well, in my opinion, to assume straight away that you have to deal with a progressing valvulitis which will soon exhaust the power of the organism to keep pace with it by compensatory hypertrophy of the muscular tissue. That such is at times the case is indisputable. Having decided that there is a real lesion there are some other points to be ascertained.

The first is the character of the valvular mischief; whether the case is one of by-past injury without any tendency to progress, or is of the progressive type. This the history of the case will usually determine. If the patient has been scant of breath on exertion for years, then probably the lesion is old. Perhaps the dyspnœa on effort dates from some comparatively recent illness, may be rheumatic fever ; or if an elderly person with a mitral lesion, from an attack of bronchitis. If, however, on the other hand, the patient complains that recently the breath has been found to be getting short, and the murmur has got the wonted concomitants of the gouty heart, probably the mischief is a progressive valvulitis. Not only your prognosis, but your treatment will be materially influenced by the character of the lesion.

The second is its extent. Have you a large or a small lesion to deal with ? The amount of injury inflicted varies with different cases. A mitral lesion may be so small as only to make itself felt on considerable effort ; or it may be such as to necessitate a light occupation ; or it may be so great that the individual is reduced to the condition of a human lizard, incapable of active movement. Such a case I have in the hospital at present in a girl of fourteen. Her injected cheeks, her blue lips, her hurried respiration alike tell of a large mitral lesion. The congestion of the pulmonic circulation, the diminution of the thoracic space, and consequently the necessity for rapid inspiration, tell far more as to the extent of a mitral lesion than does the character of the murmur. Eloquent as to the presence of mischief, the murmur is voiceless as to its extent. That must be measured by other evidence than that furnished by the stethoscope. Then there is the associated condition of the muscular wall. A small lesion (no matter whether its murmur be small or loud) only calls for moderate hypertrophy ; and if in aortic regurgitation you find little (that is, comparatively little) ventricular enlargement you may feel pretty certain you have only a small lesion before you. That small lesion may become a large one ; and, if so, the enlargement of the ventricle will tell you very distinctly of the progress of the valvulitis, and the amount of deformity it is producing. The aortic valvulitis due to strain progresses at a very different rate in the university oarsman, who gives up his athletics and settles down as a parish priest, married and sedate, to that exhibited in the case of a boatman who must work hard to live. Where strain is continuously thrown upon the parts, the progress from bad to worse is rapid. Where a quiet life is led, the valvulitis seems to come to a standstill. As a broad rule, then, it may be laid down that in aortic disease the size of the left ventricle is the best guide to the extent of the disease. And another broad rule may be laid down alongside this, viz.: the greater the enlargement the sooner the compensating hypertrophy will be exhausted ; the smaller the hypertrophy the longer it can be maintained. Consequently the prospects in a small lesion, if static, are infinitely better than in those cases where the lesion is a large one.

Beyond these matters lies the question of the condition of the muscular fibrillæ, whether well-fed, ill-fed, or the subjects of fatty degeneration.

When a patient presents himself or herself before a medical man, complaining of symptoms which point to a valvular lesion, and such is actually found, it does not necessarily follow that there is any marked change going on in the valvular mischief. This may be the case, but by no means necessarily so. The valve-injury may date back for years, but it is only recently that the patient has felt worse than usual. It is failure in the muscular wall ! There has been sustained over-demand upon the heart ; or there is a history of defective nutrition, or a mixture of both. Commonly it is found that the necessity for toil has made the patient persevere with it, disregarding the uncomfortable sensations until these last become supreme, and he must hie to the doctor. Or times have been bad, work slack, and wages small, and then the underfed condition reveals itself in loss of vigor in the restless, ever-working heart. Here it is enough to lessen the demand upon the heart, to provide a sufficiency of nutritive food, and brace up the heart-muscle by agents which increase the vigor of its contractions, and the case does well. The heart improves till its owner can once more work. Or maybe the digestion is upset, and the assimilation of al-

buminoids is defective, or their further elaboration by the liver is impaired by some disturbance of that viscus, and then the heart and diaphragm are alike underfed, and then the symptoms of fatty degeneration are closely simulated. And such is the explanation of many a sudden breakdown in a heart, the seat of an old-standing, non progressive valvular lesion. Here attention to the liver is requisite for sufficient tissue-nutrition. In other cases there are not merely the symptoms of fatty degeneration, but other evidences of tissue-decay are furnished (a matter which will be considered in the next article), and there exists no reasonable doubt that mural decay is on foot, resistless and irremediable. When assured that such is the case, no prognosis can be too dark.

In dealing with a valvular lesion there are to be considered (1) its site; (2) its pathological nature; (3) its extent; and (4) the associated condition of the muscular walls; not only diagnostically but prognostically and therapeutically.

What lessons in practice does pathology teach us as to the treatment of valvulitis? It tells us that while the inflammatory storm is sweeping over the endocardium the most perfect rest is desirable. Yes; but its study tells us more! It tells us that so long as there is any cell-growth going on underneath that endocardium, perfect rest should be maintained. The less the development of the connective-tissue corpuscles, the smaller the ultimate deformity caused by their inevitable contraction. To limit the cell-growth is to bound the resultant lesion. So clear is this, that no roll of statistics is required to prove it. Perfect rest in the recumbent posture, the system calmed, and the blood-pressure lowered by chloral if necessary.

Such is the rational treatment of a case of acute valvulitis until there is a reasonable assurance that the day of the development of connective-tissue corpuscles is past and over. Limit the lesion first! When the injury is done, the process of mutilation over, then, and not till then, please, comes the time to help the system to build up the necessary compensatory hypertrophy. The first line has to be inexorably maintained until the valvulitis is or has been brought to a standstill. To get a patient who has been the victim of endocardial inflammation to make one unnecessary effort, is to drive a nail into his coffin. In progressive valvulitis quiet is desirable so as to avoid strain on the diseased valves. In both cases digitalis, which increases the strain on the valves, is contra-indicated in the true interests of the patient until heart-failure sets in. When a gouty element is present in chronic valvulitis, then a non-nitrogenous dietary and uric-acid solvents are distinctly indicated.

Virchow upon the Cholera and Tubercle Bacillus.—At the time of the return to Berlin and public reception of the Cholera Commission, Professor Virchow made a speech, in which he uttered some timely words of warning. He said: "It appears to me that the Government is not entirely free from the opinion that with the discovery of the bacillus everything is accomplished which may be necessary to control the disease. In this connection I may speak a warning word. It is more than thirty years since we discovered the little organism which causes the small-pox, but this fact has not changed in the least the practical measures previously adopted for its prevention. The tubercle bacillus is a very important thing, but with the exception of a new point of view of the disease, which is given, we are no further advanced in our practical relations to it." He then goes on to say that the cholera has for some time been practically treated as though it were caused by a special organism. He also referred to the laxity of the English in the matter of quarantine.

Hiccough.—A sure cure for hiccough is a pinch of snuff, according to Dr. P. F. Ellis, in the Texas *Courier-Record*.

MANACA IN THE TREATMENT OF RHEUMATISM.

Report of Fourteen Cases.

By C. M. CAULDWELL, M.D.,

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During the past year I have used the fluid extract of manaca in the treatment of thirty-five cases of rheumatism, and have come to regard it as a valuable remedy in certain forms of this disease. The drug was first brought to my notice by Dr. John H. Ripley, who had prescribed it, in private practice, with very satisfactory results.

As the information to be gathered concerning the action of the drug was rather indefinite, it was decided to note its effect upon persons in health, before commencing its use in disease. Accordingly, two healthy men were given twenty drops of the fluid extract, five times daily for one week. The only appreciable effect was an increase in appetite and a slight "valerian-like" odor of the urine; otherwise this secretion remained unchanged. The pulse and temperature were unaffected, and no abnormal sensations were produced.

The drug was now prescribed for patients suffering with various forms of rheumatism. My cases differed widely in occupation, habits, and social position—some being private patients, some inmates of St. Joseph's Hospital, while others were treated at the New York Polyclinic. The ages ranged between eleven and fifty-eight years. The sexes were about equally represented. The dose of the fluid extract—which was that prepared by Parke, Davis & Co.—was from half a drachm to three drachms a day. In no case did the drug disturb the digestion, while in several instances the tongue cleared and the appetite improved during its administration. In about one-eighth of the cases frontal headache or a sense of fulness in the head developed after the medicine had been pushed for several days.

Manaca was used in but two cases of acute articular rheumatism with high temperature; in both it absolutely failed to relieve the pain or modify the fever.

In cases of chronic rheumatism it frequently gave relief, and in a few instances all rheumatic symptoms slowly disappeared. In this class of patients my results would probably have been better had the dose been larger, as Dr. W. S. Gottheil reports (in The Medical Record of September 8, 1883) seven successes out of twelve chronic cases, all having been treated with large doses of the drug. The doctor usually gave six drachms of the fluid extract per day, and occasionally as much as an ounce and a half in twenty-four hours.

By far the most satisfactory results, in my experience, were obtained in cases of subacute rheumatism, in which there was little or no rise in temperature. Fourteen patients suffering with this form of the disease were treated. Twelve recovered and two received no benefit whatever.

The following are histories of the cases of this class:

Case I. *Rheumatism of six weeks' duration; recovery in one week; two relapses.*—R. J——, twenty-one years of age, plumber, applied for treatment February 12th, stating that for six weeks he had been unable to work on account of rheumatism in all the larger joints. This was his first attack of the disease. The knees were the original joints involved, but the pain and swelling had constantly shifted from one articulation to another, at the same time increasing in severity, so that now it was difficult for him to walk even a short distance. Examination showed moderate redness, swelling and tenderness of the ankles, left knee, and right elbow. The patient's general condition was excellent. Temperature, 100⅘°. No cardiac complication present. Manaca given in twenty-drop doses four times a day.

February 14th.—Considerable improvement has taken place. Both swelling and redness are rapidly diminishing. Continue treatment.

February 19th.—The patient expresses himself as perfectly well, being entirely free from rheumatic symptoms. Ordered to continue manaca in connection with tincture of iron for ten days longer.

February 28th.—Patient returns, complaining of the same trouble, which came on yesterday while working in a newly plastered room. His ankles and left knee are red, hot, and swollen. He has taken no medicine since last seen, as he considered it unnecessary "to drug himself when he was well." Manaca ordered as before.

March 5th.—All symptoms have again subsided, and the patient is at work. He refuses to continue treatment, as he holds that "medicine is for the sick, not the well."

April 2d.—He has remained in perfect health up to two days ago, when the old enemy again attacked the ankles and knees. These joints are swollen and tender to-day. Manaca as formerly.

April 4th.—Rheumatism has subsided, and the young man is now willing to continue any medicine prescribed. Manaca and iron tincture are to be kept up for two weeks.

May 1st.—There has been no further relapse.

Case II. *Rheumatism of thirty-six hours' duration; recovery in one week.*—R. E. C——, aged thirty-three; actress. Patient was first seen February 11th, and had then been in bed for thirty-six hours, suffering with an attack of rheumatism, which had involved in rapid succession the left shoulder, elbow, both wrists and ankles. The joints of the upper extremities were swollen, hot, and exceedingly tender. Temperature, 101°. The patient was thin, anæmic, and in very poor general condition. Considerable cardiac hypertrophy and a well-marked mitral regurgitant murmur were noted. Thirteen years before she had "rheumatic fever with rheumatism of the heart," confining her to bed for about two months. Since had often had mild attacks of the articular affection. Cardiac palpitation had at times been troublesome. A saline laxative, to be followed by twenty drops of manaca, five times daily, was ordered, and the affected joints wrapped in cotton.

February 14th.—The patient has been very comfortable for twenty-four hours, and rheumatic symptoms are rapidly subsiding. The temperature is normal. Treatment continued.

February 18th.—Recovery is complete. Manaca and iron tincture are to be continued for two weeks.

March 15th.—There has been no relapse.

Case III. *Rheumatism of three weeks' standing; recovery within a week; relapse.*—M. W——, aged twenty-five; porter. Patient came under observation February 19th. He had then been unable to attend to business for three weeks on account of rheumatic pains and stiffness in knees, elbows, ankles, and wrists. For two days the right knee had been red, swollen, and somewhat tender; a week previous the elbows were in the same condition; and before that the right ankle had been the troublesome joint. His general condition was fair. Temperature normal. He never had rheumatism before, but both parents suffered from the disease. Ordered manaca, in fifteen-drop doses, five times daily.

February 25th.—All his symptoms have subsided and he is at work. Is to continue treatment one week.

March 2d.—Patient returns with his former complaint in both ankles and left wrist. He neglected taking his medicine as directed, thinking the precaution unnecessary. Last evening, after exposure, the present attack came on. Manaca as before.

March 5th.—Patient is in good condition once more. Ordered to continue medicine for ten days, and then gradually diminish the dose.

Case IV. *Rheumatism of five weeks' duration; recovery in five days.*—M. S——, aged thirty-five; domestic. This servant was first seen on February 21st, having then had rheumatism for five weeks. It had shifted from one articulation to another, until nearly every joint had, in turn, been stiff and painful, but never inflamed. In spite of the usual anti-rheumatic remedies she had not improved. Four or five years before she had a similar attack. Her general condition was excellent. Manaca in fifteen-drop doses, four times daily, was ordered.

February 23d.—Considerable improvement has taken place already. Continue treatment.

February 26th.—Reports entirely free from rheumatism and feeling very well. Ordered to continue medicine one week longer.

Case V. *Rheumatism of six weeks' duration; recovery in ten days.*—E. O'C——, aged forty-nine, housekeeper. The patient was first seen February 26th, having then been suffering for six weeks with subacute rheumatism involving the knees, elbows, and wrists. For about two months she had had more or less supraorbital neuralgia and been greatly troubled with acid dyspepsia. For three years she has been subject to subacute rheumatic attacks. Her general condition was fair, but anorexia and insomnia were complained of. The knees and elbows were stiff and tender, but no swelling was present. A saline laxative, followed by twenty drops of manaca four times daily, was ordered.

February 28th.—No improvement in the condition of joints. Appetite and digestion are a little better. Continue treatment.

March 2d.—Joints are much better, but the patient complains bitterly of lumbago, which came on as the joints began to improve. Continue manaca, and apply sinapisms over the lumbar region.

March 6th.—Reports free from both lumbago and rheumatism to-day. Is put upon full doses of iron tincture, to be continued for one month.

April 15th.—The patient was looked up to-day. She has had no return of her former troubles, but keeps a supply of manaca on hand for immediate use in case of returning rheumatic twinges. She is also treating several of her rheumatic friends with the remedy.

Case VI. *Rheumatism of two days' standing; recovery in four days.*—C. E. K——, aged thirty-two, cutter. The patient was being treated for phthisis when, upon February 28th, he was attacked with pain, tenderness, and stiffness in both shoulders. Within twelve hours these symptoms shifted from the right shoulder to the elbow and wrist. As his lung trouble was progressing favorably it was decided not to interrupt the antiphthisical treatment, and a stimulating liniment only was ordered for the affected joints.

March 2d.—The rheumatism is worse. Last night the patient was very restless from joint-pain. Give manaca in fifteen-drop doses every three hours. Stop all other medicines.

March 6th.—Rheumatism has steadily improved, and to-day is fairly gone. Stop manaca and return to former treatment.

March 31st.—There has been no return of rheumatism.

Case VII. *Rheumatism of two months' duration; recovery in one week.*—J. C——, aged twenty-three, engineer. Patient applied for relief February 28th, complaining of soreness and stiffness in the muscles of the lumbar region, also of well-marked lameness in both feet and ankles. The ankles, insteps, and toes were swollen and tender on pressure; slight redness but no heat was present. No other joints were involved. The young man had several previous attacks of lumbago, but never had articular rheumatism until two months before coming under observation. During those months his lameness gradually increased, although in fine weather he was able to get about quite well. His general health was good in spite of a free indulgence in tobacco and alcohol.

Total abstinence and fifteen drops of manaca five times daily were ordered.

March 3d.—Reported somewhat relieved of rheumatism, but suffering with a severe frontal headache, which

may be due to the medicine or to beer. He has taken both faithfully. Ordered a saline laxative and manaca as before.

March 7th.—Rheumatic and head symptoms have subsided and the patient has returned to work. Is to continue treatment for one week and report any relapse.

Case VIII. *Rheumatism of three weeks' duration; manaca a total failure.*—M. H——, aged thirty-five, domestic. For fifteen years this patient has had repeated attacks of pain and stiffness in all the larger joints, but always unaccompanied by inflammatory symptoms. During these attacks an approaching storm renders her almost helpless, while in fine weather she can do ordinary housework fairly well. Her habits were very bad. In fact she was intoxicated when first seen, and was suffering from gastro-intestinal catarrh, evidently due to a liberal use of beer and whiskey. She was free from rheumatism at the time. Treatment was directed against the gastro-intestinal disorder. Upon March 1st she began to complain of general joint-pain and stiffness, but as her stomach was still irritable it was not deemed best to institute anything in the way of internal anti-rheumatic treatment. The troublesome joints were rubbed with a stimulating liniment and covered with flannel.

March 13th.—The gastric trouble is much better, but no improvement in the rheumatism has taken place. Manaca in twenty-drop doses five times daily is ordered.

March 15th.—Pains are more troublesome. Rheumatism increasing in spite of improved general condition. Continue treatment.

March 19th.—No improvement. Continue treatment.

March 23d.—Rheumatic symptoms are decidedly worse. Stop manaca; try a mixture of potassium, iodide, and colchicum wine.

April 10th.—Patient made a very satisfactory recovery upon this treatment.

Case IX. *Rheumatism of four weeks' standing; recovery within two weeks.*—H. M. S——, aged forty-five, artist. The patient was first attended for rheumatism upon April 14th, and had then been troubled for about one month with aching and stiffness in all the larger joints. An approaching storm increased these symptoms so as to confine him to his room, while in fine weather he was out of doors, free from pain but never quite free from stiffness. In former years he had similar attacks, but of shorter duration. His appetite and general condition were poor. Pills of iron, quinine, and strychnine, with twenty drops of manaca four times daily, were prescribed.

April 17th.—Patient thinks he is a little better, but seems more stiff and feeble than at the last visit. Continue treatment.

April 21st.—Marked improvement has taken place during the last two days. Only trifling stiffness now remains. Same treatment.

May 1st.—Rheumatism has given no trouble for a week. Stop manaca and continue tonic pills.

May 15th.—No return of the disease up to date.

Case X. *Rheumatism of four days' duration; recovery in two days; relapse.*—T. McK——, aged forty-four, merchant. Patient had been under treatment for phthisical consolidation of the left apex for several weeks. Upon May 6th he was exposed during a profuse night-sweat, and the following day was confined to bed with pain and stiffness in all the larger joints, especially the knees. He had a similar attack years before. A mixture of potassium, iodide, and colchicum wine was ordered, and the limbs wrapped in flannel.

May 10th.—The rheumatism is no better, and the patient is troubled with anorexia and insomnia, being unable to take his usual exercise in the open air. Treatment changed to manaca, twenty drops six times daily.

May 12th.—Recovery from rheumatism is complete. Discontinue manaca and return to antiphthisical treatment.

May 16th.—A relapse occurred to-day, and patient is confined to bed. Manaca as before.

May 21st.—Recovery is again complete, and manaca is to be continued with other drugs for a couple of weeks.

June 20th.—No further relapse has occurred.

Case XI. *Rheumatism of two days' standing; recovery in six days.*—M. R——, fifty-two years of age, mason. When first seen upon June 15th the patient had been confined to bed for two days with his first attack of rheumatism. The knees, especially the right, were hot, swollen, and exceedingly painful on motion and pressure. The ankles, elbows, and wrists were also involved but less severely. Temperature normal. Appetite and general condition good. Wrap the joints in cotton and take twenty drops of manaca five times daily.

June 17th.—There is no change in the case except that the force of the inflammation is now felt in the shoulders and elbows, the knees being much better. Increase dose to thirty drops five times daily.

June 20th.—During the last two days recovery has been rapid, and the patient has spent most of his time out of doors. He complains of considerable frontal headache, which came on yesterday and is getting worse. Reduce dose of manaca one-half.

June 22d.—The patient has entirely recovered from rheumatism and headache. Stop manaca and take iron tincture for two weeks.

July 15th.—Patient seen to-day; has had no further rheumatic trouble.

Case XII. *Rheumatism of a day's duration; entire failure of manaca to relieve.*—C. J. S——, twenty years of age, salesman. Upon July 10th the patient, while under treatment for phthisis, fell asleep in a draught, and shortly afterward was seized with pain, heat, and swelling in the left shoulder and elbow-joints. In a few hours the inflammation shifted to the ankles, causing well-marked lameness. There was no rise in temperature. General condition was bad. Ordered manaca in twenty-drop doses five times daily.

July 12th.—The joints are more painful, and the patient more irritable than when last seen. Continue treatment.

July 15th.—The young man is steadily getting worse and is now confined to bed. Ordered the dose increased from twenty to thirty drops, but the patient refuses to continue the drug and intimates that he must have a change either of treatment or physician. He has a change of treatment, and a mixture containing potassium, iodide, and colchicum is given.

July 25th.—The patient has slowly but steadily improved since the last note was made, and is now almost free from rheumatism.

Case XIII. *Rheumatism of twenty-four hours' duration; recovery in two days.*—T. McG——, aged fifty-five, carpenter. For fifteen years this patient has been a sufferer from chronic rheumatism to a greater or less extent. When he came under observation he had had no rheumatic symptoms for six months, but had been much troubled by cardiac palpitation, cough, and dyspnœa. Examination showed extensive pulmonary emphysema, chronic bronchitis, and a mitral regurgitant murmur. His general condition was fair. Concentrated nourishment, rest, and a mixture containing convallaria and quebracho were prescribed.

Upon September 15th he awoke with stiff, swollen, and painful elbows, wrists, and ankles. During the day the knees became affected, and muscular rheumatism developed in the lumbar and cervical regions.

September 16th.—The condition remains as yesterday. All former medicine suspended, and manaca in twenty-drop doses five times daily is ordered.

September 18th.—The more acute symptoms have subsided, leaving only stiffness—especially of the knees. Iron tincture and convallaria are to be added to the manaca and continued for two weeks.

October 15th.—The above treatment has been carried out. No relapse has occurred.

Case XIV. *Rheumatism of two weeks' standing; recovery in five days.*—C. C——, aged eleven, school-girl. Was first seen, for rheumatism, upon September 22d. For several days she had complained of slight stiffness and soreness in the knees, shoulders, and neck. Her general condition was excellent. Ordered Dover's powder, to be followed by small doses of Rochelle salt three times daily.

October 1st.—The joint-stiffness and soreness has not entirely disappeared at any time since last note was made, and to-day it is worse than ever before. Ordered manaca in twenty-drop doses three times daily; also clothe the child in flannel undergarments.

October 3d.—Considerable improvement has taken place.

October 5th.—Recovery complete. Continue treatment for one week.

VERATRUM VIRIDE AND GELSEMIUM IN THE SUCCESSFUL TREATMENT OF TETANUS.

By R. B. HARRIS, M.D.,

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The pathology of this most formidable malady is, to say the least of it, limited, and as yet wrapped in some obscurity. It is certain, however, that the symptoms of tetanus are to be referred to an unhealthy action in the nerve-centres, *spinal* and *ganglionic*. The disease has been thought by many writers to be a purely reflex phenomenon, and although the writer of this article is inclined to take this view of it, yet he is in considerable doubt as to its truth. In support of this theory cases of traumatic tetanus have been reported where, upon the division of the nerve, the spasms have ceased and the patient recovered.

Macnamara reports a case in which he saw tetanic spasms result from the ligation of a large bleeding pile, his patient being attacked with spasms of the sphincter ani muscle within thirty-six hours after the operation, and although the ligature was immediately removed, the disease ran a rapidly fatal course. Many cases of a similar character might be noticed here, but it is not the intention of the writer to discuss the pathology of tetanus in this paper to any lengthy extent. There are many cases of tetanic spasms coming under our observation where it is impossible to refer the attacks to a wound, abrasion, or apparent injury of any kind, and it is in these cases that the difficulty arises of attributing the disease to *reflex* action. The morbid effects in this class of cases may, however, be set up by some source of irritation in the mucous tissues or in the glandular system, and therefore hidden from view. The pathological changes in the spinal cord after death from tetanus are said to consist of extensive congestion of the tissues, with some exudations; but the question arises, and a grave one too, as to whether these changes are the *causes* or the *effects* of diseased nerve action; could this question be satisfactorily determined, much light would be thrown upon our subject.

It is unnecessary for the writer to enter upon the symptomatology of tetanus, except as to temperature; a bare mention of the fact, however, suffices, that all cases of this disease which have come under his observation have exhibited a temperature not exceeding 101° F., and this while the heart's action was as high as 130 and 140 beats to the minute. The main object of this article is to report four cases of tetanus treated by the writer, in which he believes recovery due to the administration of veratrum viride and gelsemium.

Case I.—W. S——, a young, vigorous, and plethoric man, twenty-two years of age. Was called to him August 11, 1867; found him with little or no fever, very restless and uneasy, tongue heavily coated, and speech a little thick. Upon inquiry, learned that two weeks since he had received a slight injury, from which he had suffered but little. Yesterday, the 10th, had a slight spasm which repeated itself this morning with some violence, and occasioned my being sent for in haste. After getting this much of the history of the case, I gave one grain of sulph. morphia and watched my patient closely. In about one hour or so I discovered some retraction about the scrobiculus which caused a slight difficulty of breathing. I now began to suspect tetanus, and, fearing this uneasiness about the epigastrium portended another spasm, I gave him a teaspoonful of laudanum. (This case came under my treatment before the hypodermic syringe was generally used.) I examined the wound he had received, and found nothing but the cicatrix of what appeared to have been scarcely more than a scratch, just above the patella of the right knee. His bowels had not been moved for two or three days, I therefore had administered two ounces castor oil and twenty grains calomel in combination. I now noticed considerable contraction of the extensors of the back, and some rigidity of the entire muscular system; gave two grains of gum opii, and in a short time, seeing that a spasm was inevitable, gave a teaspoonful of laudanum with the hope of keeping it off; but in half an hour after this last dose he was attacked with a most severe spasm, his body forming a complete arch, and lasting ten or fifteen minutes. As soon as this was over I gave him two more teaspoonfuls of laudanum, which I got down with some difficulty; in a few minutes he again had a most terrible spasm. The muscular system was now perfectly rigid, the jaws firmly closed, and the hands tightly clenched, and this after the administration of four teaspoonfuls of laudanum, two grains of opium, and one grain of morphia in four hours. The pulse now ran up to 110, and somewhat irregular. Had the spine and extremities vigorously rubbed with turpentine and mustard, and enemas of salt, soap, and warm water given, but without the desired effect. Spasms continued at short intervals.

August 12th.—This morning patient perfectly rigid, pulse 140, and pupils very much contracted. The temperature in this case was not taken for want of a thermometer. Having given all the *narcotics* I thought was prudent, I determined to change my tactics, and accordingly gave patient ten drops Norwood's tinc. veratrum viride, and having had his head and shoulders pulled over the edge of the bed with a large tub underneath, I poured four large pitcherfuls of cold water over the head, neck, and shoulders; when the last pitcherful was being poured on the system gradually relaxed, and my patient in a few minutes lay seemingly exhausted; pulse now 130; pupils contracted. Two hours and a half after the first dose of veratrum I gave twelve drops more. At three o'clock, now three hours since the last dose of veratrum was given, I gave another of twelve drops; in one hour his pulse dropped to 104, and he fell asleep.

At 6 P.M. another violent spasm came on, and I again resorted to the cold douche with equally good results as before, and as soon as the spasm ceased I gave another dose of veratrum combined with fifteen drops tinc. gelsemii. (Tinc. gelsemii was made of the green root, four ounces to a pint of ninety-five per cent. alcohol, macerated for fifteen days and filtered; the tincture made from the dried root is almost worthless.) In two hours after this dose was taken the pulse fell to 68. Patient now perfectly quiet and seems much better, pupils almost natural size.

Under this condition of things, I ordered four drops of veratrum (Norwood's) and eight of gelsemium to be repeated every four hours, with instructions that, should a spasm come on, the cold water was to be used as before.

August 13th.—This morning patient seems much better; pulse 64, skin cool, pupils dilated, but tongue very heavily coated; ordered an enema of castor oil and warm water, which brought about a very copious action of the

bowels. Discontinued the veratrum and gelsemium and ordered quinia sulphate, three grains every three hours. Was sent for this evening, and on arrival I found my patient in another violent spasm. I at once applied the cold douche as above mentioned, and as soon as possible administered ten drops of veratrum and fifteen of gelsemium; in a short time the muscular system became relaxed and patient more quiet. After waiting two hours I repeated the last-mentioned dose, and in a short time after had the satisfaction of witnessing the gradual fall of the pulse from 120 down to 68 beats. I now ordered veratrum and gelsemium to be repeated and continued in four and eight drop doses every four hours until my return.

August 14th.—Patient doing well, but a little dull; continued last prescription; pulse 60; ordered a flight milk punch three times a day.

August 15th.—To-day patient is brighter and calls for nourishment; pulse 62, pupils natural, and tongue cleaning; takes his nourishment readily, but complains of great stiffness of the jaws; continue prescription as above.

August 20th.—I have attempted to stop the veratrum and gelsemium twice since the 15th, but each time my patient evinced some spasmodic symptoms, and I returned to them in combination as before, with positive results.

August 23d.—Patient improving slowly, is very much prostrated, but has an increasing appetite. Veratrum and gelsemium continued in three- and five-drop doses every four hours with quinine.

August 26th.—Patient discharged to-day, with instructions to continue the medicine for five days longer, gradually diminishing the dose.

Case II.—This case came under my observation June 18, 1879, and was a case of idiopathic tetanus in a girl twenty years of age. When I first saw her she was in a most violent spasm, no portion of her body touching the bed on which she was lying, except her heels and the back of her head. I immediately resorted to the cold douche, but without the same happy result as in the preceding case; the effect was good, however, and I soon had an opportunity of giving fifteen grains of calomel and two ounces of castor oil in combination. Tongue very much coated; pulse, 126; temperature, 99½; respiration, 23. Ordered the following to be given at once:

℞. Fl. ext. veratrum vir..... 3 j.
Fl. ext. gelsemii..... 3 iij.
M. S.—Give fifteen drops in a little water every two hours, and increase each dose two drops.

Saw her again in four hours from my first visit; had had two spasms; pulse, 112; continue prescription. Four hours from *last* visit, no more spasm, pulse down to 40; gave a tablespoonful of brandy, shortly after which the pulse rose to 70. Continue prescription in ten-drop doses every four hours. This patient was up in seven days, but continued my prescription for one week, gradually diminishing the dose.

Case III.—Negro boy, aged eleven years; was called to him December 14, 1881. Upon inquiring into the history of the case, I learned that about two weeks prior to this time he had received a severe blow upon the back; on examination there was no external signs of violence, except that there was an apparent tenderness about the third and fourth dorsal vertebræ. The boy was speechless; pulse, as well as I could count it, between 140 and 150; temperature (in axilla), 100°; jaws so firmly closed that I could scarcely insert the point of the blade of a thin case-knife between the teeth, and a terrible rigidity of the entire muscular system. In this case I saw no hope of recovery, but in a few minutes I had a course of treatment laid out for him, and lost no time in putting it into execution. I had a large tub of hot water brought in, and emptied a common size (quarter-pound) box of mustard, and a half-pint of salt into it, and put my boy in up to his neck; while he was in this bath I had another smaller tub of *boiling* water brought in, and into this I put a large blanket; I now gave my patient five drops of the fluid extract of gelsemii and half a drop of the fluid extract of veratrum viride hypodermically. After being in the bath twenty minutes I had the blanket in the boiling water wrung out and spread upon his bed, and the boy immediately rolled in it up to his chin, and in an hour after repeated my hypodermic dose. Some discretion should be exercised in rolling a patient in this blanket taken immediately from a tub of boiling water, as there is danger of too much heat. Having to go to another patient I returned in two hours, feeling that I would not be surprised to find him dead; but to my astonishment he was as limp as an old wet rag, and in a profuse perspiration; pulse 98, but jaws still firmly closed. I ordered castor oil and warm water enemas to be given every fifteen minutes, until an action was had on his bowels. Saw him again about bedtime, six hours from my last visit; bowels well acted on; pulse, 104; gave him another hypodermic dose of veratrum and gelsemii and rolled him in another hot blanket as before. I could now get the point of a teaspoon between his teeth. Ordered the following:

℞. Fl. ext. veratrum vir..... 3 j.
Fl. ext. gelsemii..... 3 iij.
M. S.—Give ten drops in a little water every four hours.

December 15th.—Patient improved in every respect; pulse, 84; temperature, 99°. When spoken to he answers with a nod or shake of the head; has taken some nourishment. Ordered last prescription continued, with the addition of three grains of quinine every four hours.

This case progressed to almost complete recovery, was up and walking about the house, when suddenly, from some unknown cause, he was attacked with convulsions and died before medical aid could be obtained, on December 25th.

Case IV.—J. M——, aged fourteen years; about three weeks since, this boy received an injury on the side of the head, caused by a blow which had cut to the skull. His father told me that about two weeks after the reception of the injury, he had noticed that the patient got about very badly and would occasionally fall down.

I was called to this case on February 26, 1884; found him sitting up, but having regular tetanic spasms every few minutes; pulse, 120; temperature very little above normal; jaws partially closed and rigid. I at once gave him an ounce and a half of castor oil and twelve grains of calomel in combination, and ordered him to bed, giving his mother instructions to keep warm poultices to the wound on his head.

February 27th.—Patient in the same condition as when I saw him yesterday, except that his bowels have been copiously acted on by the calomel and oil. Ordered the following:

℞. Fl. ext. veratrum vir..... 3 j.
Fl. ext. gelsemii..... 3 iij.
M. S.—Give fifteen drops in a little water every three hours.

This evening (February 27th), pulse down to 48; gave him a little brandy and ordered prescription to be continued in eight drop doses every four hours, with the addition of three grains quinine with each dose. Whenever my patient was sleepless at night I occasionally gave a few grains of chloral hydrate and bromide of potassium, but with this exception, there was no other treatment instituted in this case, which progressed to complete recovery in fourteen days.

I am somewhat in doubt as to the therapeutical action of the veratrum and gelsemii, but will have more to say upon the subject in the near future. In the meantime I earnestly ask the profession to give this matter their serious consideration and attention, and report the results.

WHEN ARE WE AT GREATEST RISK FROM CONSUMPTION?

By EDGAR HOLDEN, M.D., Ph.D.,
MEDICAL DIRECTOR, MUTUAL BENEFIT LIFE INSURANCE CO.,
NEWARK, N. J.

For many years, even among the best informed, the impression has prevailed that consumption exhibits a preference as regards development, for certain ages. Thus, it has been the conviction that those who escape the marasmus and tubercular meningitis of infancy come again into danger at puberty, and that again between thirty-two and thirty-eight a climacteric is reached at which the mortality acquires its maximum of intensity, then diminishing to declare a wholesale sweep between sixty and sixty-five.

These views have grown out of an experience apparently well founded, since the mortality in every physician's personal field of observation has seemed to be greatest at those periods, but the conclusion is nevertheless a fallacy, and it has been made broader and deeper by statistics of mortality in which the ratio of deaths from consumption to the total number of deaths has been relied upon.

A moment's reflection, however, will show that while we may judge of mortality from any given disease with reasonable accuracy by comparing the number of deaths with the total number of deaths; yet, for individual ages or decades, we must obtain the ratio of deaths borne at these ages to the total number *living* at those ages.

The reason for this will be obvious from the fact that a far greater number are living between thirty and forty than between fifty and sixty, and consequently there is a far greater harvest for this most prevalent of diseases.

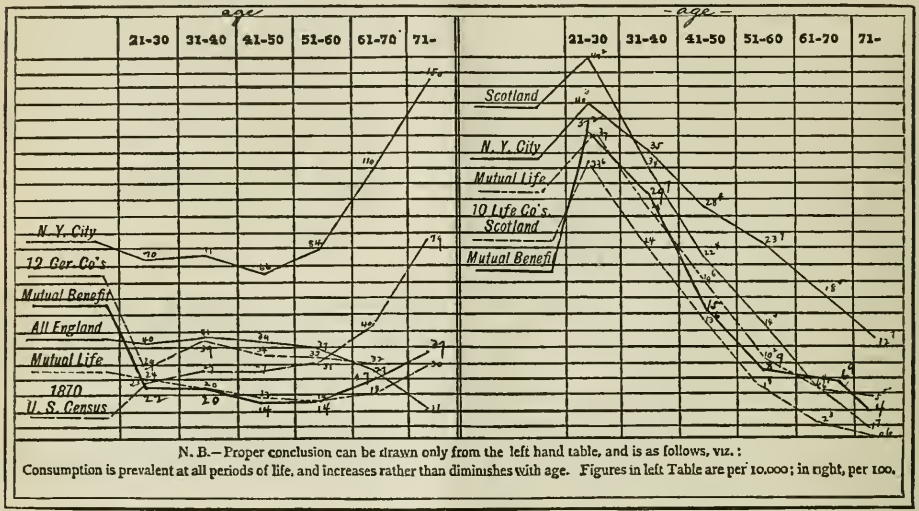
Rare facilities for prosecuting an investigation to obtain a correct result have led me with considerable labor to a conclusion as startling as I trust it will be found conclusive, viz., that death from consumption, instead of being, as is almost universally supposed, most prevalent in early adult life in this country is in reality not so, but grows relatively more frequent as life advances. This is true in the community at large, and among selected lives is actually less at the ages hitherto deemed most susceptible.

The figures dealt with have been so large as to make deductions from them secure, and the correspondence of result from the diverse sources enumerated in the table can leave no doubt of the correctness of the conclusion.

The experience of the population of New York City, of England, and of the United States in general, give the results for unselected lives and may be contrasted with the experience of life insurance companies which deal only with those carefully selected.

CONSUMPTION.

Showing the difference between actual and apparent mortality (adults only).



N. B.—Proper conclusion can be drawn only from the left hand table, and is as follows, viz.:
Consumption is prevalent at all periods of life, and increases rather than diminishes with age. Figures in left Table are per 10,000; in right, per 100.

The advantages derived by these companies from selection is manifest. The right hand table exhibits the results of the fallacious figures heretofore deemed trustworthy.

ON THE HEROIC USE OF CALOMEL IN DIPHTHERIA AND CROUP.

By I. P. KLINGENSMITH, M.D.,
BLAIRSVILLE, PA.

After having given the ordinary or expectant plan of treatment, including iron, quinine, chloride of potash, lactic acid, stimulants, etc., a faithful trial for eight years, and having had the usual high mortality rate, I began to look about for other remedies more definite and specific in their action.

About this time Dr. J. W. Anawalt, of Greensburg, Pa., called my attention to the success of the calomel treatment in his hands. Since then three cases have come under my personal observation, to which I will briefly call attention. In each of these cases the disease manifested as great a degree of malignancy as in many others treated in past years by the ordinary methods, which terminated fatally.

Case I.—On Sunday, April 10, 1883, I was called to see Amos McD——, aged twenty-eight months, of previous delicate health. Upon examination I found the pulse rapid and irritable, skin hot and dry, and the voice husky, with a croupy cough. The tonsils and a portion of the fauces were covered with a thick, tough, whitish-yellow exudation; while the glands at the angle of the jaws were somewhat enlarged and tender. I at once ordered twenty grains of calomel, which was followed by ten grains every hour, until the third day, when, the membrane beginning to separate at the edges, the mercurial was discontinued. During the first three days of the treatment, a total of seven hundred and twenty grains of

calomel were given, after which a solution of chlorate of potash was administered every two or three hours for a few days.

From the third day on there was a gradual improvement in the case, and by the sixth day the membrane had separated entirely. The recovery was rapid, and the exhaustion, so common in cases of such gravity, was entirely absent.

Case II.—On the afternoon of February 22, 1884, I was called to see Hulda H——, aged three and one-half years, of hitherto good health, who had then been suffering for forty-eight hours, during which time she had slept but little.

Upon examination I found a temperature of 102° F., rapid pulse, hurried respiration, croupy cough, extensive deposits, and congested face. I at once gave her twenty grains of calomel, which was followed by ten grains every hour for fifteen hours. A gradual improvement of the symptoms ensued after the administration of the first few doses, enabling the child to fall into a natural refreshing sleep. After discontinuing the calomel, the following mixture in drachm doses was given every two or three hours for a few days:

℞. Potass. chlor..... gr. xxx.
Ammon. mur..... gr. l.
Syr. prun. virg..... ʒ ij.
M.

By the fifth day convalescence was fully established, and the child made a rapid recovery.

Case III.—I was called to see Alice H——, aged four years on May 8, 1884. She had then been indisposed for upward of twenty-four hours. An examination revealed a high temperature, painful croupy cough, labored respiration, skin dry, face flushed with some diphtheritic deposits. I immediately administered twenty grains of calomel and followed with ten grain doses every hour until twelve doses were given, making a total of one hundred and thirty grains. In this case no other remedies were used, and in three or four days the child had fully recovered.

The mercurial used in these cases was the English calomel, and was given by filling a teaspoon half full of cold water, then dropping the medicine upon it, after which it was placed well back in the mouth of the patient. The calomel purges, but not to excess, causing simply free and copious evacuations of a greenish appearance. I have never known ptyalism to occur in a single case. My experience with this plan of treatment is based upon the three cases detailed above, besides a number occurring in the practice of other physicians. I am not one of those who claim to cure all my cases, but I do believe that with a faithful and proper administration of the remedy in question, disintegration and separation of the membranes will be facilitated, as well as relief afforded to allay the spasmodic character of the disease.

Differential Diagnosis of Simple and Tubercular Meningitis.—In an analysis of a number of cases of meningitis occurring in the Children's Hospital at Stockholm, Dr. O. Medin endeavors to formulate the points of difference in the tubercular and simple forms of the disease. Tubercular meningitis attacks only those children already suffering from tuberculosis of other parts, while simple acute meningitis occurs usually in previously healthy individuals. The former manifests its onset by convulsions, frequently strabismus, and dilatation or contraction of the pupils. Vomiting is frequent at the commencement, diarrhœa is the usual condition, and constipation is rare. The abdomen is never flat. The simple form begins with somnolence, twitchings, sudden changes of color in the face, and hyperæsthesia. More frequently than in the tubercular form we meet with the hydrocephalic cry and paralysis limited to the arms or to the face. The tubercular variety is always fatal in its termination—*Revue Médicale*, May 24, 1884.

Progress of Medical Science.

Splenectomy.—Dr. Koeberlé reported to the Société de Médecine de Strasbourg a case of extirpation of the spleen performed by him in April last. The operation was performed on account of hypertrophy consecutive to intermittent fever, the spleen measuring sixteen inches in length. The liver was also greatly enlarged, and there was an abundant serous exudation in the pleural, pericardial, and peritoneal cavities, together with œdema of the lower extremities. Despite difficulties occasioned by diaphragmatic adhesions, the operation, lasting over three hours, was successfully performed. The patient, having come from under the influence of the anæsthetic, was resting comfortably, when suddenly the eyes rolled convulsively, a few long inspirations were taken, and life became extinct. Death was supposed to have been caused by an intercranial hemorrhage.—*Journal d'Accouchements*, May 30, 1884.

Ergot in the Treatment of Constipation.—Dr. Granzio reports two cases of constipation, following the abuse of purgatives, relieved by ergot. Three doses of ten grains each were given at intervals of two hours, and were followed by a copious evacuation. A second stool occurred spontaneously the next day, and after the administration of ergot in smaller doses for a few days a definite cure was obtained. The constipation was due to atony of the muscular wall of the intestines.—*Allgemeine Medicinische Central-Zeitung*, May 24, 1884.

Chlorotic Fever.—About two years ago Dr. Humbert Mollière and F. Leclerc published the results of some thermometric observations made by them in cases of chlorosis, which seemed to indicate that this is a febrile condition. Since that time others also have observed the same thing. In the *Lyon Médical* of May 25, 1884, Dr. Mollière states that a further series of observations, in some cases extended through a period of eight months, has verified his previous conclusions, and established definitely the fact that chlorosis is a febrile disease and that the old name of febris alba virginum is strictly correct. The temperatures were taken with scrupulous regularity at the same times each day, and always by the rectum. In most cases there was a slight evening exacerbation, but in one instance the reverse obtained, the mercury being higher in the morning than in the evening. The average temperature was from 100° to 101.8°. Care was taken to exclude all cases in which there was even a suspicion of tubercular trouble. In some young girls, who were not chlorotic, but were simply anæmic from overwork or poor food, no elevation of temperature existed. In all the cases of true chlorosis there was a cephalic souffle, audible over the eyes on a level with the temples, and in some instances in the occipital region. This souffle was synchronous with a systolic murmur heard at the base of the heart and with bruits in the vessels of the neck. The febrile action was always in proportion to the intensity of the disease, subsiding gradually as the chlorotic condition disappeared. The urine in the cases examined was of normal amount, very light colored, sometimes containing a slight cloud of mucus, and never presenting any excess of urea above the normal quantity. Dr. Mollière leaves undecided the question as to the nature of this constant febrile reaction, whether it be a true pyrexia or of nervous origin, but inclines to the former opinion.

Antipyresis by Inunction.—Colbat favors a revival of the old method of Schneemann of inunctions with fat or vaseline in the febrile diseases of childhood. He uses cerate or vaseline in scarlatina, variola, broncho-pneumonia, and other pyretic conditions, and states that it reduces the temperature and induces a condition of restfulness. He denies that there is any danger of blood-poisoning in the employment of these inunctions.—*Medicinisch-Chirurgisches Correspondenz-Blatt*, May, 1884.

Borophenylic Acid.—A new series of experiments has recently been made to determine the antiseptic value of this substance. Borophenylic or phenylboric acid appears in the form of bushy needles, slightly soluble in cold water, but freely so in hot water, alcohol, and ether. It has a faintly aromatic odor, recalling that of marjoram. It has no caustic action upon the mucous membranes, even when applied in the form of powder, but excites merely a slight irritation. In fifteen-grain doses it causes ringing in the ears, vertigo, moderate headache and somnolence. Its antipyretic properties are said to be undoubted, and it would appear to be of greater efficacy than carbolic acid in arresting fermentation and putrefaction.—*Journal de Médecine de Bruxelles*, May, 1884.

Production of Paralysis without Anæsthesia by Peripheral Irritation.—Brown-Séquard, in experiments upon guinea-pigs, has found that when chloral is applied to the external auditory canal complete muscular paralysis without loss of consciousness is induced. When chloral is injected into the stomach the same effect is observed, though in a less marked degree. In every case the loss of the power of voluntary movements preceded anæsthesia and sleep. The experimenter supposed that a special influence was exercised upon the nervous centres, through irritation of the auditory, auricular, or other peripheral nerves, whereby muscular movement was abolished without loss of sensibility.—*Gaceta Médica Catalana*, May 31, 1884.

Repeated Attacks of Vomiting in Children.—This affection is one of early childhood. Vomiting occurs in attacks, coming on at varying intervals of time and lasting from a few hours to several days. The little patients are often greatly debilitated. There is frequently pain, sometimes intense, in the epigastric or umbilical region. The stools are irregular, sometimes abundant, sometimes scanty, and may be whitish or clay-colored. The causes are variable. The attacks may be due to exhaustion, to a nervous condition, to improper nourishment, or to the influence of cold. As regards treatment, a low diet, with or without chicken broth, is advised, and in addition calomel in small doses should be exhibited—*L' Union Médicale du Canada*, No. 3, 1884.

Prophylaxis of Puerperal Fever.—In his report of the Rotunda Hospital for 1883 (*Dublin Journal of Medical Science*, June, 1884), Dr. A. V. Macan recites in detail the method in vogue in that institution for the prevention of puerperal hetero-infection. Vessels containing a 1 to 40 solution of carbolic acid are placed over every wash-hand basin, and every one, before making a vaginal examination, is required to wash his hands in the solution, using a nail-brush carefully, and afterward dips them for half a minute in a 1 to 1,000 solution of corrosive sublimate. Every student or nurse who examines a woman *per vaginam* has to write his or her name down on a card, so that if the patient should afterward prove to be infected the origin of the infection may be traced. Only four students are allowed to examine any given case, and none who is dissecting is allowed to enter the hospital. There is an absolute rule against touching the woman's genitals with the fingers after delivery, except in cases of post-partum hemorrhage, ruptured perineum, or retained placenta, and then the assistant master only is allowed to make the examination. If any operation be necessary the vagina is irrigated and the external genitals are carefully washed in a 1 to 2,000 corrosive sublimate solution, and afterward the uterus is syringed out, and a suppository containing 3 jss. of iodoform is passed to the fundus and left there. Dr. Macan sees no necessity for prophylactic antiseptic injections if the fingers and instruments are perfectly free from septic poison, and consequently never uses them. Out of 1,090 women confined during the year but six died, and all these deaths followed more or less complicated labors. Not a single woman died who had a natural labor, nor was there a death among the 64 cases of forceps delivery, many of which were difficult extractions, and some undertaken before the full dilatation of the os. In the same report, Dr. Macan states that the temperature of every case was taken twice daily, and that he was unable to recognize any constant rise of temperature, even to the extent of one degree, accompanying the first secretion of the milk. Indeed, the temperature curve of the puerperal state, in a typical normal case, does not appear to differ in the slightest degree from that in the non-puerperal state. He is inclined to believe that any temperature above 100° F., except immediately after delivery, indicates that something abnormal is taking place, though it may not always be possible to say what the exact cause of the rise may be.

Hypodermic Injections of Calomel in Diseases of the Eye.—Dr. Rampoldi injects calomel subcutaneously over the temples in certain ocular troubles. He maintains that there is not only a specific action in the case of syphilitic affections, but that it also acts most efficaciously as a derivative in other cases. He has seen the pupil respond readily to atropine after these injections had been used, when before they were unchanged. The good effects of this procedure are often observed in those conditions in which leeches are indicated in which there is no suspicion of a specific taint.—*Recueil d'Ophtalmologie*, May, 1884.

A New Apparatus for the Relief of Deafness.—Professor Politzer describes in the *Wiener Medizinische Wochenschrift* of May 31, 1884, a little instrument invented by himself to aid those whose power of hearing is impaired. The principle is to transmit the vibrations from the pinna to the membrana tympani. Politzer opposes Voltolini's opinion that the cartilage of the ear is a poor conductor of sound, and on the contrary believes that the pinna, by means of its vibrations, is of great importance in the mechanism of hearing. His apparatus consists of a small elastic drainage-tube, one end of which is beveled off so as to rest evenly against the drum membrane, while the other end is curved slightly and by its elasticity presses gently against the anti-helix. Near its outer extremity the tube is attached to a small concavo-convex rubber plate. This plate is fitted so that its concave side lies in apposition with the concavity of the concha. The idea of this attachment is to increase the conducting power of the instrument and to transmit with greater facility the vibrations of the pinna. In a large number of experiments made to test the value of this instrument, the inventor found that in most cases the hearing distance for the voice was considerably increased, in some instances from two feet without to fifteen or twenty feet with the apparatus. In many cases the hearing distance for the watch was also increased, though in no such striking degree as that for the voice. In cases in which the drum membrane was partially or entirely destroyed, it was found necessary to attach an artificial drum to the inner extremity of the tube. In deafness due to anchylosis of the ossicles or to disease of the labyrinth, little or no improvement was obtained by the employment of the tube.

Action of the Intercostal Muscles.—M. Laborde has recently performed some experiments upon the cadaver of an executed criminal which would seem to have solved the problem concerning the action of the intercostal muscles. The body was obtained a very short time after death, while the electrical reaction of the muscles was still present. M. Laborde ascertained that contraction of the internal intercostal caused a narrowing of the thoracic cavity, while that of the external muscles caused an elevation of the ribs and an expansion of the chest. Hence the external intercostals are muscles of inspiration, and the internal of expiration.—*Revue Médicale*, May 24, 1884.

A New Edition of the Siamese Twins.—A case is reported in the *Hospitals-Tidende* of May 21, 1884, of twins born in a parish in Finland. Each child has its own head and the two upper extremities. From the united body two normally shaped legs are given off, and between them is the single genital organ (female). In addition there is a third leg, the foot of which is provided with eight toes. There are two anal openings. While one child sleeps the other may be awake and crying.

Paraldehyde in the Treatment of Delirium Tremens.—Dr. Gugl reports some additional cases of delirium tremens treated successfully with paraldehyde. The drug was given in the syrup and tincture of orange peel, and was taken readily by the patients, the taste and smell leading them to regard it as a particularly good quality of schnapps. The author asserts that paraldehyde is absolutely without danger in the dose of 1½ to 2 drachms per diem.—*Allgemeine Medicinische Central-Zeitung*, May 28, 1884.

Variations in the Size of the Pupils in Epileptics.—As a result of a number of observations, Dr. Giuseppe Musso concludes that: 1, The pupils of epileptics do not dilate to any greater extent than do those of healthy individuals; 2, in a large proportion of cases there is an habitual dilatation of the pupils of greater or less degree; 3, in a certain number of cases the epileptic attacks are preceded by an inequality in the size of the pupils, which inequality disappears when the fit is over; 4, although in certain cases of epilepsy inspection shows a greater sensitiveness of the pupils to the stimulus of light, yet this phenomenon is not of sufficient frequency to be of any special diagnostic value.—*Recueil d'Ophtalmologie*, May, 1884.

The Dosimetric Method of Administering Chloroform.—M. Peyraud takes a piece of fine cambric, and doubling it once, lays it on the face of the patient to be anæsthetized, covering only the mouth and nose. On the little bridge of cloth passing from the nose to the mouth he pours a single drop of chloroform, waits until an inspiration has been made and then pours another drop, and so he proceeds, putting on just one drop immediately after each expiration. At the end of some minutes, if anæsthesia is delayed, he increases the dose to two drops. Complete insensibility is obtained ordinarily in from seven to ten minutes. The writer claims that anæsthesia is produced by this method without any preliminary stages of agitation and hyperæsthesia, and without the occurrence of any irregularity in the pulse or respiration. When once anæsthesia has been obtained he withholds the chloroform for a minute or two, and then resumes its administration in the average dose of three drops per minute. The patients, it is said, find the chloroform given in this way not at all disagreeable to inhale, and so small is the proportion of chloroform in the inspired air (the vapor of one drop to 30.5 cubic inches), that there cannot possibly be anything to disturb the functions of hæmatosis or to irritate the respiratory mucous membranes. M. Peyraud cites several instances in which anæsthesia was produced and maintained during an operation with very small amounts of chloroform. In one case of an hysterical woman on whom an operation, lasting an hour and a half, was performed for cancer of the kidney, only 6¼ drachms of chloroform were used. It is assumed that the danger of arrest of the heart's action is, in this procedure, reduced to a minimum.—*Journal de Médecine de Bordeaux.*

In abstracting this article, a writer in the *Gazette Médicale de Strasbourg*, of June 1, 1884, states that the dosimetric method has been in vogue in that city for many years. Esmarch's apparatus, consisting of a wire mask covered with a piece of fine linen and fitting over the mouth and nose, is used. The air passes freely through the wire gauze on each side, while the linen serves to hold the chloroform. A contrivance is also employed by means of which the anæsthetic can be delivered drop by drop, with perfect accuracy, as required. The writer is in perfect accord with M. Peyraud as regards the great advantage possessed by this method of administering chloroform. He states that in a laparotomy recently performed, anæsthesia was maintained for three hours with the expenditure of one ounce of chloroform.

Tubercular Neuralgia.—In an article in *La France Médicale* of May 29 and 31, 1884. Dr. Ferdinand Dreyfous states that neuralgias are observed in tuberculous subjects in three different stages of the disease. 1. In the terminal stage they are, in the majority of cases, to be attributed to the cachexia which is a recognized cause of neuralgia in other conditions. 2. During the course of well-established phthisis we often observe intercostal neuralgia, or even tuberculosis of the phrenic or pneumogastric nerve. In these cases the painful nerves are in more or less intimate connection with the organ chiefly affected. 3. Finally, in the initial period we may meet with peripheral neuralgias in various parts of the body, but by far the most common is sciatica. It is not usually very troublesome and is frequently overlooked by reason of the attention being directed chiefly to the general condition. It is, however, not at all infrequent at this period of commencing tuberculosis, and has even been described as one of the early symptoms of the disease. Sciatica, when occurring at this stage, is usually unilateral, a point of some diagnostic value, since neuralgias of diathetic or toxic origin, as in diabetes and plumbism, are more commonly bilateral and symmetrical. The sciatic nerve is more frequently affected, it is supposed, partly because of its large size and partly by reason of its relatively abundant vascularity, which exposes it to greater danger of colonization by the micro-organisms.

Funnel-Shaped Thorax.—Dr. F. Percival relates an instance of this curious deformity in the *Rivista Clinica* for May, 1884. The subject was a man, forty years of age, whose family history showed a predisposition to phthisis, and one of whose sisters showed evidences of marked rachitis. He had himself always been healthy, and two children of whom he was the father were perfectly sound. The malformation of the chest had existed since birth, but had never caused any inconvenience on the part of either the heart or lungs. The excavation, shaped like a truncated cone, began at the junction of the manubrium with the sternum, and ended below at a distance of about five inches above the umbilicus. One could put his closed fist in the depression, and at first sight it seemed as though the sternum must touch the spinal column. The greatest depth was three inches, and the distance from this point to the spinal apophyses was scarcely four and a half inches. The aperture of the depression was of an oval shape, measuring six inches in length and four and a half in width. It was situated a little more to the right than to the left side of the thorax. Posteriorly there was a slight degree of kyphosis of the vertebral column, but no lateral deviation. Dr. Percival thought that the cause of the deformity was probably an arrest of development in the sternum, possibly due to a disease of the bones allied in its nature to the rachitis from which one of his sisters had been a sufferer.

Tubercles of the Breast.—The following are the conclusions formulated by Dr. Ghislani Durant in an article with the above title (*Gaillard's Medical Journal*, June, 1884): 1. The breasts may be the seat of tumors similar to the pathological products, found in many other organs, to which the name of tubercle is given. 2. Tubercle in the mammary gland is much more common than is generally supposed. 3. Mistakes as to the true nature of these growths have often been made, and ablation of the breast, from a belief in their cancerous nature, has often resulted. 4. During life we may by clinical observation distinguish these from other tumors. 5. As no absolute necessity for the ablation of these tumors exists, we should refrain from operating, unless unequivocal signs of malignancy develop.

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CHOLERA AND ITS PREVENTION.

THE report that cholera has appeared in a seaport town of Europe sounds a note of warning which the health authorities of the United States would do well to heed. It is possible that the European States, with their experienced boards of health to guide them, and their well-equipped sanitary police to execute their orders, may prevent the spread of the pestilence on the continent. But whatever precautionary measures foreign governments may take to protect themselves, it will be the part of prudence to examine at once our own defences, and take such measures as will secure us against an invasion of the Oriental scourge. For we are, in truth, but little less exposed to an invasion of cholera than the cities contiguous to Toulon, owing to the constant emigration of the lower classes of that and other seaport cities of the Mediterranean to this country.

If we examine our methods of preventing the introduction and spread of contagious and infectious diseases of foreign origin in the light of modern science, knowledge, and experience, we can but conclude that they are cumbersome, expensive, and inefficient. Indeed, we do not hesitate to state that for the most part our machinery for protection against foreign epidemics was constructed, and is managed, in the spirit and enlightenment of the middle ages. Our quarantine system is still too much governed by the old idea, that time is the most important element in the destruction of the contagious or infectious germ, and that non-intercourse is the true method of preventing the propagation of the germs of epidemics.

Within the past two years the old *cordon sanitaire*, which is but another name for the shot-gun quarantine, has been the chief reliance of the highest functionary in this country to prevent the spread of yellow fever. Within the same period a vessel having on board hundreds of emigrants suffering from small-pox, has been detained in quarantine until the disease had completed its work, not a person being allowed to leave the ship in the meantime. This is only another method of enforcing the old dogma of non-intercourse, and is closely allied to the *cordon sanitaire* and the shot-gun quarantine.

The inadequacy of our present measures of prevention will become apparent if we reflect for a moment upon the present teachings of science as to our power to destroy in their incipiency the very germs of the diseases against which we create and maintain our costly and well-nigh useless quarantines. If cholera be taken as an example, we can readily determine how far in advance of our practice are the requirements of sanitary science. We now know that cholera can never invade this country, except the germs are, first, in the digestive organs of a human subject; or, second, are in his clothing, goods, or other effects where they have been lodged. With this knowledge as our guide, how simple and effective become all of our preventive measures! We aim to effect two objects, viz., first, to destroy the germ; and second, to prevent its introduction into the human stomach. The first is accomplished by the use of well-known germicides, and the second by care that neither by water, food, unclean hands, or other means, the germ enters the mouth. With a proper appreciation of these simple yet fundamental facts, we may apply preventive measures with precision. The cholera germ can be sought out and destroyed as absolutely as the spark of fire that would cause a conflagration. This was repeatedly proven during the outbreak of 1866 in this city, when scarcely two cases occurred in the same family, so promptly were remedies employed. An outbreak of cholera among the institutions on Blackwell's Island was in the same manner at once, and absolutely, suppressed by attacking the germs, and guarding the inmates against the ingestion of choleraic matters. It will be readily understood that preventive measures based on these principles wholly discard non-intercourse, whether enforced by *cordon sanitaire* or shot-gun quarantine. On the contrary, no other obstruction is offered to travel and traffic than what may be necessary to find and destroy the germs in transit.

Again we repeat that in the light of the above facts our quarantine system, and our quarantines at their best, will prove at present, as in the past, no effectual barrier against the introduction of cholera into this country. They are a delusion which serves a good purpose in quieting the apprehensions and fears of the public mind, but should no longer deceive the health authorities of this country, and especially of the great seaboard cities. Not a moment should be lost in the most thorough sanitation of these cities, and a vigilant supervision should be given to all forms of diarrhœal affections. We do not assume the rôle of alarmists, but would in all seriousness warn our health authorities that cholera in a seaport town of Europe always did, and now does, indicate that it is at our own doors.

The only system of preventive measures against epidemics of foreign origin which can ever adequately accomplish the purpose was partially organized by the National Board of Health. Had its powers been equal to the task we should now have a service which would be an impregnable defence against the invasion of cholera. That Board inaugurated the following scheme, viz.: 1. The co-operation of commercial nations in notification of the existence of pestilential diseases, in uniform and well-matured measures of defence and protection. 2. Sanitary inspection of every vessel at the port of departure, with power to detain and care for the sick, to secure absolute cleanliness of the ship, and to thoroughly supervise the cargo. 3. A sanitary service at sea which should isolate every form of contagious disease, destroy the first evidence of contagion, and pre-

serve the vessel, passengers, and cargo, in the best sanitary condition. 4. A series of insular refuge stations to which every infected vessel must resort before attempting to enter a port; this station was to be fully equipped with every appliance which science and experience could suggest for the cure of the sick, the cleansing of the ship, and purification of the cargo. 5. Local quarantines with every provision for the most exact expert examination of passengers, cargo, and vessel, as to the presence of the germs of disease. Such a service is practicable, and when fully perfected and put in operation will bring to a summary termination the roving pestilences which now infest the great lines of travel and commerce. But until this reform is accomplished local sanitary authorities must rely upon works of cleansing to remove every condition favorable for the reception and propagation of the epidemic, and by vigilant inquiry and inspection discover the first evidences of the presence of the disease, and destroy every vestige of contagion.

INFANTICIDE IN THIS CITY.

MURDER has always been looked on as the most heinous of crimes, and only to be expiated by the life of the murderer. This view, of course, is the one taken from the spirit and letter of the law. Although at times the object of the law is defeated through a variety of causes, the justice of capital punishment is seldom disputed. It happens at intervals that a very carnival of murder seems to pervade certain communities, and then the sense of outraged justice asserts itself, and the people demand the rigid enforcement of the provisions for its punishment. In New York City crimes have been committed, mysterious and horrible, like the Nathan murder, that have been for weeks and months the wonder of sensation lovers and the fear of the timid. The newspapers devote column after column depicting every minute detail of such tragedies as the one mentioned, and yet of another form of murder, more revolting if possible, there is seldom any mention made, or if there is it takes the shape of a three or four line item.

Suppose in the space of four months and a half the police had picked up, in various parts of Manhattan Island, the bodies of forty-five unknown men and women who had met death by violence, starvation, or exposure at the hands of parties unknown? Would not the public heart almost congeal with horror to think of the awful saturnalia of homicide being carried on in the city? Would not the citizens of New York demand, in tones not to be misunderstood, that every effort should be used to bring the murderers to justice? There has not been in the time mentioned that number of adult bodies found, but there has been of children ranging in age from a few hours up to two months. In February there were three found, in March seven—three on one day, the 28th; in April eight; in May *twenty-one*, and in June up to the 20th of the month, six. To give some idea of the extent of territory covered by these figures, it is enough to say that eighteen police precincts, Central and Riverside Parks, are represented. These statistics are from the Coroners' records and are presumed to be correct, and do not include any cases of fœticide; neither are any included of which there is the least knowledge in regard to either parent or of the child previous to the finding of the body. These forty-five are absolutely unknown, and almost certainly the victims of infanticide. The Coroners have held inquests in all the cases and found that death has resulted from many causes, but beyond drawing the fees accruing it cannot be said that they have done anything in the premises. Indeed, it is hard to believe that they do not consider the frequency of this fearful crime in the nature of a special dispensation rather than a sad commentary on the decaying morals of a civilized people.

The police, too, apparently regard infanticide as a necessary evil, and make no attempts to discover the perpetrators; or if they do make such efforts, they are only perfunctory and are given up almost as soon as started. They have a most peculiar method of reasoning in explaining their luke-warmness in ferreting out this species of murder. Their argument is, in effect, that the ones who commit the crime are so cautious and circumspect in disposing of the evidence in another part of the city from that in which the crime was committed, that it would be useless to attempt to discover the author. Strong logic, truly! The crime of murder can be engaged in with impunity if the murderer will only act with discretion! The reasoning is too diaphanous, however. There is in most of these cases a strong thread of evidence to begin with, which, in the hands of one who cared to use it, could be turned into a mighty cable, or at least into a hempen rope strong enough to sustain in mid-air the fiend or devil cruel enough to destroy a defenceless child. The claim that evidence is hard to obtain might be listened to, were the facts different and the finding of a child's body a rarity; but it seems supremely silly to set up such an excuse when the instances are so widely scattered throughout the city and of such alarming and amazing recurrence. Some parts of the city seem to be favorite and selected repositories for murdered children; one of these delightful spots is that part of the Eighteenth Precinct situate between Twenty-third and Twenty-fifth Streets and First and Second Avenues. This vicinity has been selected, no doubt, on account of its propinquity to the Morgue, and such little incidents serve to show the tender consideration of these pleasant people to whom abortion is a recreation and child-murder a pastime.

On the night of May 1st a party of boys found the body of a child in a marble-yard on Twenty-third Street, near First Avenue. An officer of the Eighteenth Precinct brought the body to the Morgue. It was about five weeks old, and about its neck and face showed signs of death from either suffocation or strangulation. It was well clothed and had been placed in a coarse bag with a paving-stone weighing ten or twelve pounds. Manifestly the intention of the party leaving the body in the marble-yard was to await an opportunity to drop it in the East River. In answer to an inquiry made by a reporter the sergeant at the desk in the police-station said that the case did not amount to anything, and even if it was infanticide, it would be impossible to obtain any clue. The following night another body was found a block distant from where the first was. Two nights after a third dead child turned up within a stone's throw of the police station. Three cases in four days! and yet there was

nothing to work on! It is safe to say that any reporter who had taken a case with as good points as these would never hold up his head again had he not worked them to a successful conclusion. Further than this, leaving out of the question the evidence furnished by the circumstances attending the finding of each body, there is the undeniable fact that no child is born without some one knowing of the birth beside the mother, and it is rank foolishness to assert that the child can disappear and only one person be acquainted with the circumstance.

But the police do injustice to their detective abilities. The real reason they make no effort to unearth the murderers of children is not the lack of evidence but the lack of inducement. These poor murdered children never had the right to exist, and if they are made away with no one grieves or pines. The unhappy mother is rid of a burden, the father of a stumbling-block, and the world of a bastard. The child itself is better off too, is the argument of the practical. All of which may be true—but shame on a social system which makes infanticide possible by teaching that it is a crime for a child to be born!

It is undoubtedly correct to say that nine-tenths of the people who ever give a thought to the subject feel a throb of pity for the so-called unfortunate mother who destroys her child. These mistaken soft-hearted persons seldom stop to consider that in many cases the mother does not do the job herself, but contracts for it through the agency of a baby-farm. Probably many of these dead children are the offspring of women living a disreputable life, who through negligence or ignorance have allowed themselves to become mothers. Pity is wasted here at least. Even if the mother is a young girl who has listened to the seducer, no excuse can be invented to cover up her fault when she becomes a murderess. Leaving speculations and arguments aside, one truth stands out in bold and horrid relief, and that is that fœticide and infanticide are looked upon to-day with a feeling nearly akin to indifference. When a Christian people have reached that point where they are not susceptible to such insidious attacks on the very basis of all morality, it is time to sound an alarm and insist on the enforcement of the statute law relating to murder, whether the victim be the offspring of a person of mark or only the unfortunate illegitimate child of a common woman.

TEMPERANCE PHYSIOLOGY IN THE PUBLIC SCHOOLS.

Publishers, in this and other cities, of text-books for schools are brought to face a curious result of the present energetic work of the temperance agitators. Writers or editors of school-books on anatomy, physiology, and hygiene are compelled to pay especial attention to the poisonous and demoralizing effects of alcohol and tobacco. In order to get a physiology accepted, the essential requisite is not that it be a good text-book, but that a disproportionate space be given to these subjects, and that statements be made which are hardly borne out by facts or in accordance with the conclusions of science.

It may be seriously questioned whether it is wise, after all, thus to inject temperance tracts into the body of a science text-book. In the long run it pays best to tell and teach the exact truth. And we are quite sure the exact truths regarding alcohol and tobacco are sufficiently terrible to impress duly the child. To say, as some text-books seem to do, that alcohol is a poison and a deadly poison, that it causes catarrhs, sclerosis, dropsy, crime, insanity, and shortened lives, and that moderate indulgence is an impossibility, is to present only one side of the picture. When the young student grows up and finds whole nations indulging in alcohol habitually, with no excess of drunkenness, and when he learns other features of the reverse of the picture, the results of his one-sided instruction may easily prove to be bad. Medical men are agreed that alcohol is a poison to youth and to those of hereditary taint, that it is dangerous in manhood, but is helpful in declining age. They also see that moderate drinking with the meals is a possible and often useful practice.

Is not this enough to teach, without making our school text-books the organs for an intemperate and dangerous fanaticism?

ANÆSTHETICS IN ST. PETERSBURG.

It is always interesting to learn of the practical methods employed by physicians and surgeons who live in distant countries and under different conditions from our own. At a meeting of the society of St. Petersburg physicians in January last, a large number of members contributed their experience in the use of anæsthetics, and we believe that an account of the opinions expressed will be instructive. It will be seen at once that the St. Petersburg profession is still in the chloroform era of anæsthesia. This is generally the case in those parts of Europe in which the life of the lower classes is esteemed of rather small moment.

Dr. Schmitz began the discussion by saying that in the Children's Hospital of the Princess Oldenburg a doubly rectified chloroform was used, and that even in operations lasting an hour and a half no bad effects had been observed.

Dr. Wulff said that at the Obuchow Hospital commercial chloroform was employed. In the case of alcoholic patients it was customary to give a preliminary hypodermic injection of morphine to facilitate the anæsthesia. Severe collapse in the use of chloroform was not often observed. A few cases of death had occurred, but it was doubtful if the chloroform was the cause.

Drs. Hirsch and Petersen related cases of obstinate resistance to anæsthesia. Dr. Hirsch's case, a very feeble man, failed to be affected by an ounce and a half of chloroform.

Drs. Moritz and Schmitz related histories of cases of pronounced heart disease in which chloroform was given without harm.

Dr. Hirsch thought that in cases of heart disease the chloroform might kill when given a second time if it did not the first, and instanced an illustrative case in his own practice.

Drs. Moritz, Petersen, and Hintze all thought that some of the cases of sudden death after administration of chloroform were the results of psychical influence. Several cases were referred to in which death suddenly occurred on the application of the knife, although no antiseptic had been given.

Dr. Holst thought that preliminary morphine injections did not act well. They caused an unquiet narcosis.

Dr. Monastyrski thought that these injections made the stage of excitement shorter, but that in the stage of narcosis there was more danger of asphyxia. He had had much better results with the doubly purified chloroform than with the commercial article. He had given chloroform to patients with heart disease several times with no bad results.

In reply to a question as to the age at which it is safe to give chloroform to a child, Dr. Wulff said that he had given it twelve times in one day to a child under two weeks of age. Dr. Schmitz had administered chloroform to a baby twelve days old, and performed an amputation under its influence.

Dr. Magawly had used chloroform in hospital and private practice for many years. He had only met with two deaths, both occurring in weak and emaciated patients. Autopsy in one case revealed a fatty heart.

NEW METHODS OF TREATING EPILEPSY.

A WRITER in the *Berliner Klinischer Wochenschrift* has used perosmic acid in the treatment of epilepsy, giving it in full form in doses of .002 milligr. He has had but little success, a few cases only having notably improved. He, however, thinks the remedy worthy of further trial. Bourneville and Bricon have recently reported the results of their experience in treating epilepsy with sclerotinic acid. They gave it in daily doses of 10 ctgr. gradually increased to 25. Among twelve patients thus treated, amelioration was obtained in only five. The drug is a failure as an anti-epileptic.

Professor William Pepper has delivered several clinical lectures upon the treatment of epilepsy in children. He calls special attention to the value of careful regulation of diet, of removing all sources of irritation, and of securing rest, including plenty of sleep.

In a series of experiments on chronic epileptics, Professor Henry C. Wood found that bromide of hydrogen (hydrobromic acid) decreased the number of fits more than the other bromides. He gave it in doses of ʒ j. to ʒ iij. daily.

Dr. S. Hughes Bennett, while offering no new remedy for epilepsy, has recently published statistics which show, as he thinks, that under bromides attacks are stopped in 12.1 per cent. of cases, are lessened in 83.3 per cent., and are increased in 2.3 per cent. He also believes his experience to show that the continued use of the bromides exercises no deleterious mental or physical effect except in a small proportion of cases. He thinks that epileptics can take bromides better than other persons, and that in course of time the eruptions and the depression disappear.

The experience of Kunze, who claims to have cured nine epileptics out of thirty-five with curare, has not been repeated by others. Curare has almost uniformly failed to effect any real benefit in epilepsy.

Ball, in addition to the use of bromides, belladonna, and zinc, advises the use of leeches to the mastoid process, and cathartics, in order to correct cerebral congestion.

Little has ever been done for epileptics by the use of electricity. The recent very favorable expression as to its value by Erb may, however, lead to further and more careful trials.

The experiments of Bourneville with the bromides of gold, camphor, arsenic, etc., show that not so good results can be obtained by these preparations as by the ordinary bromide compounds.

Continued contributions to the therapeutics of epilepsy only show that almost any new remedy can produce some temporary amelioration of the disease. But nothing at all approaching in value the bromide compounds as anti-epileptics has yet been discovered.

HIGH FEES IN DENTISTRY.

THE astonishing statement appeared a few days ago in the daily press that a dentist of this city had charged a fee of seven thousand dollars for four days' work in dentistry. It appears that the patients were three wealthy ladies of one family, and that the operators were father and three sons. Time consumed four days, with some extra work after hours. Value of time-work $50 per hour for each gentleman. So much can be learned from the reports referred to. The gentleman, a foreigner, to whom the bill has been sent, thinks there must be some mistake, and asks for explanations. Being assured to the contrary by the operators, he is more astonished than ever, and refuses to pay the amount.

On general principles skilled labor deserves to be well rewarded, but even that has a standard within easy range of ordinary imagination. When applied to dentistry it is hard to associate teeth-pulling, teeth-filling, and plate-making with such extraordinary or special skill as would place the value of services so disproportionately high as compared with similar work in any other mechanical grade. It is safe to say that no difficult capital operation in surgery, upon the skilful performance of which would depend the actual life of a patient, could command such a fee; nor, indeed, would any approach to such a sum be charged by any conscientious or reputable surgeon. And yet the dentist, whose responsibilities are nothing, and whose skill at best in his ordinary vocation of teeth-plugging is equal to that of a first-class mechanic, can charge a fee which would put to blush the most ambitious professional money-getter, and astonish the capabilities of a millionaire.

THE HURST PERFORMANCE.

THE Georgia Wonder, Miss Lulu Hurst, has been exhibiting her alleged wonderful powers in this city during the past week. We may say at once that she failed to satisfy the intelligent and critical among her audiences that she possessed any occult force whatever. The remarks which we made concerning her in a previous editorial were perfectly justified by a careful personal examination of her exhibitions. The "new force" acts only through the muscles of Miss Hurst and those experimented upon. It is, in fine, muscular force, and that is all. Miss Hurst is a strong, large-framed girl, and has the power of very rapidly contracting her muscles. A man takes hold of a cane with two hands and is told to hold it still if he can. He immediately throws his muscles into a state of extreme tension; Miss Hurst

then lays her big hands on the cane, with the thumbs underneath, we are told. By very slight but rapid muscular movements the cane is twitched around. The more the man resists, the more tense his muscles, and the more easily the cane is pushed about. Soon the man becomes excited; he thinks he is wrestling with a force, and performs various ludicrous gyrations. Miss Hurst ingeniously makes him labor and perspire over nothing. This is the sum and substance of all the experiments. No test upon an inanimate object shows anything at all. In keeping a chair from the floor, she holds it in a peculiar way, and apparently exerts her own not inconsiderable strength.

If Miss Hurst, as is possible, is not consciously deceiving, then it would seem as if the contact of her hands with umbrellas, chairs, and billiard cues produced a kind of artificial chorea. The phenomena she exhibits and calls out, are, at any rate, interesting perversions of the psycho-motor sphere.

They are still more interesting as illustrating the credulity and the utter incapacity for scientific examination of such performances which have existed among most of her audiences. We understand, however, that the true nature of her "force" has been exposed since her arrival in this city.

News of the Week.

Death of a Doctor from Chloroform.—Dr. MacRae, of Scotland, was suffering from a tumor at the nape of the neck, for the removal of which he went to Edinburgh, and placed himself under the care of Professor Annandale. While the chloroform was being administered prior to the necessary operation, Dr. MacRae, who was in the prime of life, suddenly died.

Memorandum for the Prevention of Cholera.—The State Board of Health has issued a memorandum regarding the measures to be taken to prevent the introduction and spread of cholera in this country. The Board consider it probable from past experience that cholera will reach this country, and they recommend the most careful disinfection and cleansing of our cities and towns.

Progress of the Cholera.—The deaths from cholera at Toulon and Marseilles have been slowly increasing in number daily from July 1st to 8th, as follows: July 1st, Toulon, 6; Marseilles, 3. July 2d, Toulon, 5; Marseilles, 4. July 3d, Toulon, 13; Marseilles, 5. July 4th, Toulon, 4. July 5th, Toulon, 7; Marseilles, 12. July 6th, Toulon, 4; Marseilles, 15. July 7th, Toulon, 9; Marseilles, 16. July 8th, Toulon, 10; Marseilles, 14; Nice. 1 (?). The total number of deaths from cholera at Toulon since the beginning of the epidemic is 154. The number of cases in the hospitals at Toulon has been between 115 and 150. Despite the number of cases at Marseilles the death-rate of the city is low, and it is believed that a great deal of needless alarm exists. Dr. Koch has arrived at Toulon, and has found the bacillus of cholera in the intestines of those who have died from the disease. He pronounces it Asiatic cholera, therefore. He is reported to have stated that it would spread to Germany; also that the germs of the disease were taken into the system in food and drink, not by inhalation. While the Spanish, Italian, and Austrian Governments have instituted quarantine against vessels from French ports, England refuses to adopt anything but her inspection system. A vessel from Marseilles with two cases of cholera on board is said to have been intercepted in the Channel. All passengers and baggage arriving at Paris from infected districts have now to be disinfected.

The Colorado State Medical Society met at Denver on June 19th, 20th and 21st. Dr. Whitehead, President, in the Chair. The following officers were elected for the ensuing year: *President*—Dr. Hawse, of Greeley; *Vice-Presidents*—Drs. Soly, Rogers, and Earhart; *Recording Secretary*—Dr. S. A. Fisk.

The Investigation of Lulu Hurst.—We have received a number of letters from Southern medical men protesting against our judgment of Miss Hurst's performances. We venture to answer them all here by publishing a letter written in answer to one of them by a gentleman who investigated the matter at our request: "Dear Doctor: Having been asked to investigate the Hurst phenomenon, I went and saw her last night. In common with the medical gentlemen with me, I thought she utterly failed to demonstrate the possession of any peculiar powers; the phenomena could all be explained, and easily, by assuming the existence of unconscious convulsive movements and by the peculiar muscular rigidity and expectant state into which those experimented upon got themselves. While perfectly willing to be convinced, we saw nothing to justify us in assuming a new force, but only a curious disturbance of the voluntary motor system, and an interesting illustration of what may be done with persons in a state of expectancy and great muscular tension. Some of her experiments were subsequently repeated among ourselves. Miss Hurst does indeed cause dead matter to move, but no more than any large and muscular girl could make it."

Disinfection of Rags from Egypt.—The following are methods of disinfecting rags which are considered satisfactory by the Treasury Department: 1. Boiling in water for two hours under a pressure of fifty pounds per square inch. 2. Boiling in water for four hours without pressure. 3. Subjection to the action of confined sulphurous-acid gas for six hours, burning one and a half to two pounds of roll brimstone in each 1,000 cubic feet of space, with the rags well scattered upon racks.

Local Health Officers and Inspectors of Customs.—The Treasury Department has decided that State Health authorities cannot prevent United States Inspectors of Customs from landing at quarantine stations and pursuing their duties there, if necessary. The question came up at Charleston, S. C.

Experiments with a Decapitated Human Head.—M. Labarde has been making some truly ghastly experiments with the head of Campi, the murderer, who was recently executed in Paris, and in the *Revue Scientifique* he publishes an account of them. By means of a tube he connected the carotid artery of the head with the corresponding artery of a living dog, and the head being placed upright on a table, the stop placed on the dog

was removed. As the blood was carried into the head the livid hue of the face disappeared and color returned, the forehead and cheeks being suffused and the eyelids moving. Some time had elapsed since Campi's death, and M. Labarde regrets that such experiments cannot take place immediately after execution, as the physiologist might thus be able to witness a "grand and terrible spectacle."

Dr. Martin McGovern has been appointed Police Surgeon, *vice* Dr. M. H. Henry, resigned.

New Method of Supporting the U. S. Marine Hospital Service.—The last Congress passed the following law: "That sections forty-five hundred and eighty-five, forty-five hundred and eighty-six, and forty-five hundred and eighty-seven of the Revised Statutes, and all other acts and parts of acts providing for the assessment and collection of a hospital tax for seamen, are hereby repealed, and the expense of maintaining the Marine Hospital Service shall hereafter be borne by the United States out of the receipts for duties on tonnage provided for by this act; and so much thereof as may be necessary is hereby appropriated for that purpose." The sailor is, therefore, no longer taxed forty cents a month, and the marine hospital service is supported by the owners of vessels, instead of by their employees. The question may now be raised, whether employers can constitutionally be taxed for the support of their employees when sick.

Gifts to Hospitals.—The sum of two million francs was bequeathed by the late Baroness Alquier for the erection of a new hospital in Paris. The London Hospital has just received $50,000 from Baroness Rothschild.

Membership in the American Medical Association.—At the meeting of the American Medical Association, held at Washington in May last, an amendment to Regulation II. was adopted, which provides that "Membership in the Association shall be obtainable by any member of a State or County Medical Society recognized by the Association, upon application, endorsed by the President and Secretary of said Society; and shall be retained so long as he shall remain in good standing in his local Society, and shall pay his annual dues to the Association."

A Religious Quack Advertisement.—As a specimen of the means by which the simple are induced to part with their money, the following, says the *Student's Journal*, cut from the advertisement columns of *The Christian Million*, is worthy of perusal: "The Bitter Cry for Help.—Thousands of God's creatures are lifting up their plaintive voices for help. Poverty presses hard upon them, and renders their lives a sad monotony. Living in narrow dwellings, and constantly breathing impure air, they are physically weak and altogether unfit for the duties of life. Sickness and suffering, hunger and ignorance, are, as it were, written on the very doorposts of their dwellings. In higher circles we find a different state of things—no poverty, no badly-ventilated homes; but many afflictions, nevertheless, weigh upon them, symptoms of ill-health which their physicians appear to be unable to remove—failing sight, deafness, noises in the ears, indigestion, coughs, and a variety of other complaints, make these well-to-do people very, very sad. From all classes comes up the cry for help. The man who has the power to help his brother and is unmindful of his trust is surely unfaithful to the better promptings of his nature. The noble army of faithful workers, ministers, doctors, and sick visitors, deserve our prayers and sympathy. The Rev. E. J. Silverton, has for many years been engaged in alleviating the sufferings of mankind, curing deafness and removing noises from the ears by means of his 'Aural Remedy,' curing indigestion and all its tortures by his 'Patent Pills,' and building up broken-down constitutions by his 'Medical Energiser and Magic Cough Mixture,' and his 'Nutrient Food of Food.' All these wonderful medicines may be ordered of any Chemists, who will procure them for any sufferer. The prices are arranged to meet all classes, viz., 'Patent Pills,' 1s. 1½d., and 2s. 9d. per box," etc. Were any ordinary quack to use the name of the Supreme Being for trade purposes it would be considered rank blasphemy, but, in the case of a "Reverend" it is doubtless accepted by *Christian Million* readers as a guarantee of good faith.

An Epidemic of Typhoid Fever in Switzerland.—Typhoid fever has been very prevalent in Zurich, a city of 83,000 inhabitants. The disease has been characterized by severe complications. One of the causes is thought to have been the low water in the lake.

Journalistic Changes and Evolution.—The progress of evolution is said to proceed from the homogeneous, the simple, and the undifferentiated, to the heterogeneous and complex. Exactly the reverse occurred, nosologically speaking, when the *Kansas and Missouri Valley Medical Index* and the *New Medical Era and Sanitarian* consolidated under the plain and undifferentiated title of the *Medical Index*.

Religion and the American Doctor.—Nothing for a long time has so stirred up the religious sentiments of the American physician as a resolution introduced into the American Medical Association last May, proposing to dispense with the opening prayer. Most of our contemporaries have made vigorous comments expressing approval of the action of the Association in promptly tabling the matter. No one has put it quite so vigorously, however, as the energetic editor of the *Texas Courier-Record*, who concludes his criticisms of the injudicious introducer as follows:

"Oh, shame, where is thy blush? Oh, cheek, where is the limit to thy flintiness? Oh, immaculate gall, assurance, impudence, thy name is ——— him who insulted that grand body of grave, thoughtful, earnest workers, whose very lives and presence testify the existence and providence of the living God, and belie and belittle your puny doctrine."

It is no discredit to the heart of our esteemed contemporary that he subsequently confesses to having received the consolations of refreshment.

Third Congress of the Italian Surgical Society.—The third Congress of the Italian Surgical Society will be held in Turin on the 15th to the 20th of September, 1884. The secretaries are Drs. G. Novaro and G. Berruti, of Turin.

The French Association for the Advancement of Science meets at Blois on September 4 to 11, 1884.

Vivisection Work in England.—A return which has just been published showing the number of experiments performed upon living animals during the year 1883 under the Vivisection act, is a somewhat remarkable document. It appears that in England and Scotland 44 persons have held licenses under the act during some part of that year, of whom 32 performed experiments and 12 performed none. In Ireland 8 persons held licenses, of whom only 4 performed experiments. The total number of experiments of all kinds was 535 in England and Scotland, and 34 in Ireland. Of these 290 were carried out under the restrictions of the license alone, 55 under special certificates dispensing with the use of anæsthetics, and 122 under certificates dispensing with the obligation to kill the animal before recovering from anæsthesia. Under certificates permitting experiments on cats, dogs, horses, mules, and asses there were 102 operations, but it appears that only four or five were upon cats or dogs, and none at all upon the other animals named. As regards the 290 cases first mentioned, together with a number carried out under certificates prescribing anæsthetics, the animals were rendered insensible during the whole of the operations, and were not allowed to regain sensibility. Their sufferings were accordingly quite inappreciable by the most acute sympathizer. The 55 experiments without anæsthetics consisted in simple inoculation or hypodermic injection with morbid matter whose operation it was desired to discover, and the pain inflicted was at the most that of ordinary vaccination and its results. Of the 122 experiments in which the animals were allowed to regain sensibility, 114 also consisted principally in inoculation, and were for the most part connected with an important inquiry into the nature of tubercular affections. No pain was inflicted save in some 14 or 15 instances, and even in these it was trifling. In the remaining eight cases anæsthetics were used, and though the surgical operations amounted to more than a mere puncture, the pain would be only that usually attending the healing of a surgical wound. The experiments upon cats and dogs are classified under the heads already mentioned. The conclusion of the Inspector's report is that "the amount of direct or indirect suffering from the performance of physiological experiments during the past year was wholly insignificant, and limited to about 14 or 15 animals."

Water and Constipation.—Dr. Squibb, in his last *Ephemeris*, has a suggestive article upon constipation. He thinks that most constipations are due to insufficient water in the fecal mass. The individual does not ingest enough water to supply the blood with its seventy-nine per cent., therefore the blood absorbs it from the intestinal contents. "Drink water," is Dr. Squibb's motto. It is a good one; but water, as every one knows, will not cure habitual constipation in a very large percentage of cases.

Dr. Axel Iversen.—The name of the surgeon associated with rectal etherization should be written Iversen, not Yversen. It was incorrectly spelled in the *Lyon Médical*, in which Dr. Mollière's notice appeared, probably through the writer's attempt to represent the Danish pronunciation by the French spelling.

Reviews and Notices.

The Physician's Combined Day-Book and Ledger. By H. T. Hanks, M.D. New York: J. H. Vail & Co. 1883.

To the average physician, who knows as little of bookkeeping as he does of navigation, one of the greatest trials of his life is the keeping his accounts straight, and anyone who helps to simplify and lighten his labors in this direction may justly be regarded as a benefactor to the profession. And after a practical trial of the system here presented we are disposed to grant this title to the author. In this book provision is made for the date and character of the visit, the member of the family attended, special charges, etc., all within the smallest possible space. The charges can be continued from month to month or year to year without re-entering, and the entire account of each patient may be comprehended at a glance. The necessity of a ledger is done away with, thus saving the physician much time and avoiding all possibility of error in making the transfer. The author "claims to have arranged in this book the most exact and labor-saving system of book-keeping ever devised for the use of a physician," and as far as our experience will permit us to judge we think his claim is well founded.

Elements of Pharmacy, Materia Medica, and Therapeutics. By William Whitla, M.D. (Q. V. I.), Physician to the Belfast Royal Hospital; Consulting Physician to the Ulster Hospital for Diseases of Women and Children; Vice-President of the Ulster Medical Society, etc. With Lithographs and Woodcuts. Second Edition. London: Henry Renshaw. 1884.

This manual, intended primarily for students, contains a vast amount of practical information arranged in very convenient form for ready reference. It is divided into six parts, treating of pharmacy, materia medica, therapeutics, non-official remedies, prescription writing, and chemical reaction, with some of the more important tests. The arrangement of the drugs is in alphabetical order. There is an index of poisons and their antidotes, and a very copious general index adds to the value of the work as a ready-reference manual. The fact that a large edition was exhausted within two years is a sufficient evidence that the book has supplied a want.

Hand-Book of Eclampsia, or Notes and Cases of Puerperal Convulsions. Comprising all the Cases which have occurred during the Present Century within a Radius of Several Miles around Avondale, Chester Co., Pa., so far as can be ascertained. By E. Michener, M.D., J. H. Stubbs, M.D., B. Thompson, M.D., R. B. Ewing, M.D., and S. Stebbins, M.D. Philadelphia: F. A. Davis. 1883.

The authors of this little *brochure* have collected and studied forty-four cases of puerperal convulsions occurring during the present century in the vicinity of Avondale, and have here presented their conclusions derived from this study. Briefly stated, their belief is that the proximate cause of puerperal eclampsia is hyperæmia of the brain, and the treatment based upon this belief consists in prompt and plentiful bleeding. The essay will repay a careful perusal, even though the conclusions of its authors may not be accepted in their entirety.

Female Hygiene and Female Diseases. By J. K. Shirk, M.D., Member of the Lancaster City and County Medical Society. Lancaster, Pa.: The Lancaster Publishing Co. 1884.

This is a book intended for the laity, and treats in intelligible language of the hygiene and diseases of the female reproductive organs. It contains much useful information on a subject of which women are often too ignorant, but we think it would have been productive of more unmixed good and would have served an equally useful purpose had the directions concerning the medicinal treatment of disease been omitted.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, June 11, 1884.

R. E. Van Gieson, M.D., Vice-President, in the Chair.

Dr. Wackerhagen presented specimens as follows: The first was one of

CARCINOMA OF THE BREAST

removed from a German woman seventy-two years of age. Twenty-five years ago she noticed a small lump in the breast, which gradually enlarged but caused no inconvenience until two years ago, when it became painful. In December last a small abscess formed below the nipple, which continued discharging until the operation on May 18th. During a few weeks before the operation the pain was at times very severe, and she was anxious to have the tumor removed. It weighed nine ounces, and consisted of normal gland structure and adipose tissue, in the midst of which was a mass of fibrous tissue arranged in trabeculæ, which radiated in all directions, and in the meshes of which were free fat and probably some cell elements. To one side of the centre of this mass was a cavity whose walls were composed of the same fibrous material of a darker color, and from which could be expressed a thick greenish juice. This is probably a post-mortem change. To the touch the specimen was fairly firm, and presented nodular areas of small size throughout the mass. The smaller mass came from the axilla. It weighed about two ounces, and was composed of adipose tissue, lymphatic glands, and nodules the size of large chestnuts and composed of fibrous tissue arranged in trabeculæ which radiated in all directions, and in the meshes of which were cellular elements and some fat. To the touch the nodules were firm and fairly well defined. There were also blood-vessels disseminated throughout the mass, but apparently not in the nodules, at least of appreciable size. The dressings were bichloride and iodoform, and were not removed until the eleventh day, when complete union had taken place throughout.

EPITHELIOMA OF THE PENIS.

The second specimen was a portion of a penis removed from a gentleman aged sixty-four. He had suffered from irritation of the glans for several years, the result of phimosis. During the past year pain and itching had been very severe, and at times there had been considerable hemorrhage. The glands in both groins were enlarged, but had decreased greatly in size since the operation. The tendency of the growth seemed to be outward, rather than down into the deeper portions of the tissue. The urethra was apparently intact, excepting at the meatus. Upon the glans was seen a growth which extended from the meatus nearly to the corona glandis, or the point of junction of the glans with the cervix of the penis. This growth was soft, of a papillary or fungiform appearance, and seemed to involve, to a moderate extent, the normal tissue of the glans. A portion of the glans had been removed for microscopic examination. A similar growth was seen upon the prepuce, extending from the line of junction of the outer and inner surfaces downward on the inner surface for a distance vary ing from a scant half inch to an inch in length. It was nearly annular, forming almost a complete circle upon the inner surface of the prepuce. Upon the right side the neoplasm was gradually gaining the outer surface of the prepuce, over which it extended for a short distance.

The specimen was referred to the Committee on Microscopy.

LIPOMA OF THE NECK.

The third specimen was a lipomatous tumor removed from the neck of a young married woman, aged twenty-three. It was located posteriorly and to the right of the median line, and at a point nearly midway between the occipital protuberance and the vertebra prominens. It weighed sixteen drachms. The mass consisted of a fibrous capsule which gave off branches of fibrous tissue that filled the capsule in such a manner as to make it somewhat cavernous. Within the meshes of fibrous tissue was collected a large amount of fat, which gave to the mass a degree of compressibility. The capsule was quite thick, very tough, and vascular, as could be readily seen by the numerous ligatures on different portions of the surface. Sections of the mass float in water, giving evidence of its lipomatous nature. One or two small secondary nodules were observed around the periphery of the mass. These were similar in structure to the large growth.

The fourth specimen was an

ENCYSTED TUMOR OF THE THIGH

situated just below the greater trochanter, removed from a gentleman, aged twenty-six. The tumor was enclosed in a firm fibrous capsule which was partially covered with adipose tissue. On section a white caseous mass was seen, which was readily expressed with slight pressure. The cheesy mass was soft and mushy, disintegrating readily on pressure.

TUBERCULAR PERITONITIS—GENERAL TUBERCULOSIS.

Dr. W. P. Northrup presented a specimen with the following history: The patient was a female, inmate of the New York Founding Asylum, aged three years and ten months. She was brought in from the out-nurse in February, 1884. She was somewhat emaciated; had well-marked ascites; bowels inclined to be constipated; moderate bronchitis. Beyond these there were no noted symptoms. The ascites gave ready fluctuation, but on changing the position of the child the fluid did not move about readily—seemed to be encysted. Later, though the fluctuation continued it was less prompt and somewhat different in character.

Autopsy, June 10, 1884.—Body: Extremely emaciated, abdomen distended. Brain: Examination not allowed. Lungs: Bronchial and tracheal glands enlarged throughout, though none to a large size. Left lung is adherent over nearly its whole surface. In middle third posteriorly are two cheesy masses about the size of an ordinary hickory-nut. Aside from this the same description will serve for both lungs. Large, opaque, and glassy miliary tubercles are uniformly distributed throughout both. Between the tubercles is a moderate amount of diffuse pneumonia and well-marked œdema. Heart: Normal. Peritoneum: On opening the abdomen the muscular wall and the contents of the serous membrane are found glued together. The peritoneum is thickened and thickly sprinkled with cream-colored, rounded tubercles about half as large as a pea. The coils of intestine, large and small, liver and spleen and stomach, are tightly glued together into a fluctuating mass. Fluid, gruelly fæces escape before any artificial opening can be found. In dissecting open the intestines a coil can be followed for a few inches and then it dips down into the mass and is lost. The whole mass is then cut across and the half coils are found held in place by the gelatinous mass of tubercle and thickened peritoneum, so that the cut ends remain half patulous. Mesenteric glands have broken down into large cheesy masses. Numerous ulcers, large and small, are found. Many have perforated the wall of the intestine. Others are deeply sunk with overhanging edges. Liver: Peritoneal covering much thickened, and contains large tubercles. On section, a few ordinary miliary tubercles are found. Spleen: Same description applies to its covering, and the tubercles seen on section. Kidneys: One ureter dilated to nearly one-half more than normal size; three to five opaque white miliary tubercles found on cut surfaces.

Dr. Northrup said he had seen this condition of peritoneum in young adults, but never before in a child under four years.

Dr. Peabody thought the condition was not common in children, although sufficiently frequent in adults. Although large tubercles of the peritoneum were not common, large masses of tubercular tissue were likely to be found wherever tubercles had existed for a considerable length of time.

Dr. J. C. Peters said that some time ago he saw two cases, one in a child two or three years old, and the other in a child four or five years of age. The clinical history was peculiar in the fact that the only symptom present for some time was extreme irritability of the bladder. Afterward cerebral symptoms developed, and the existence of tubercular meningitis was evident and was supposed to be the principal disease. Both children died, after a sickness lasting about three weeks, and in each there were tubercles as large as those in Dr. Northrup's specimen, on the peritoneum, and tubercles in every organ seen; the brain was not examined.

Dr. Ferguson referred to a case of perforation of the intestine without definite symptoms, which he encountered at an autopsy not long ago, and in which the diagnosis of ovarian tumor had been made by several gynecologists. There was no ovarian tumor at all, but simply a dilated portion of intestine, which had ruptured and emptied the contents of a large sac into the peritoneal cavity without giving rise to any marked symptoms.

Dr. C. H. Knight presented a specimen with the following history:

TUBERCULAR MENINGITIS—HEREDITARY SYPHILIS?—BASILAR GUMMOUS MENINGITIS?

Jenny M——, aged one year, was first seen on March 24, 1884. Had been fretful and restless for a day or two, and had vomited once; slight febrile reaction; symptoms were thought to be due to irritation from an upper lateral incisor tooth which was beginning to come through.

Five days later I was called to see the child, whom I found lying with wide-open staring eyes, and apparently unconscious; head constantly rolling from side to side; gives a feeble cry or whine from time to time; takes no nourishment without rejecting most of it in a few moments; occasional twitchings of extremities; temperature normal, pulse slow and regular. Merc. inunc. and K. I., gr. j., every hour.

March 30th.—Pulse, 68, regular; temperature, 99½° F. in axilla; refuses to nurse; has taken little beef-tea and milk from spoon; lies most of the time apparently asleep, but the left arm is in constant motion between the side and the nose, as though trying to brush something from the face; left leg is occasionally drawn up; right side motionless and flaccid; rolling of head ceased; face pale; pupils contracted, left more than right—respond slowly to light; typical Cheyne-Stokes respiration; no vomiting; bowels moved naturally yesterday P.M.

March 31st.—Pulse irregular, 95; temperature, 100½° F.; respiration same as yesterday; pulse slows during intervals of non-respiration and accelerates with return of breathing; sleeps most of the time without moving; when roused moves only the left arm and leg; left cheek flushed, right pale; signs of iodism, hypersecretion nasal mucous membrane; occasional sneezing; congestion of conjunctivæ, especially right; no eruption.

April 1st.—Pulse, 130; respiration, 20; temperature, 101° F. Breathing is quieter and has lost the Cheyne-Stokes character; no movement of bowels for three days; urine passed naturally; pupils normal; no strabismus.

April 2d.—Pulse, 120; temperature, 99½° F.; respiration, 22 and more regular; intervals of rest occur only once in a minute or so; child seems brighter and is more easily roused; takes very little nourishment, but retains what is swallowed; when roused is fretful and makes a peculiar chewing movement of the jaw; movements of left arm and leg continued; has a vacant, staring expression, but the lids are closed when the eyes are approached by the finger.

April 3d.—Ophthalmoscopic examination attempted by Dr. Amidon; unsatisfactory view of fundus on account of incessant motion of eyeballs; apparent hyperæmia on left side; right eye wider open than left; occasional twitching of eyelids; eyeballs constantly moving up and down rather than from side to side; every few seconds left eye is drawn violently toward the nose by clonic spasm of the internal rectus; left pupil contracted, right normal or dilated and feebly responsive; child is entirely unconscious, but there is evident attempt to protect the eyes by closure of the lids when the finger or a bright light is brought near; right arm and leg motionless and flaccid, left arm inclined to be rigid; left thigh incessantly flexed and extended; extremities cold; head bathed in perspiration. Temperature, 99° F.; respiration shallow and irregular; period of rest for twenty to thirty seconds followed by a deep inspiration and an equal period of rapid breathing, at the rate of sixty or seventy to the minute; pulse, 140, irregular and compressible; bowels moved this morning after two grains of calomel; no nourishment nor medicine has been retained to-day; remained in above condition from 8 P.M. until 5 A.M. April 4th, when the patient gave a feeble cry and had clonic spasms on the *right* side lasting several minutes; then relapsed into previous condition and died quietly at 8 A.M.

For the report of post-mortem and for microscopic sections, I am indebted to Dr. Amidon.

Autopsy, nine hours after death.—Head of average size and good shape; calvarium very thin; anterior fontanelle open and depressed, about three centimetres square; scalp and dura fused at fontanelle. On cutting the optic nerves at the base, a quantity of fluid (120 (?) c.c.) escaped from the arachnoid behind the optic commissure, between the optic tracts and the crura and the under surface of pons and medulla. On removing the brain by section, just above the pons more fluid came from the iter and third ventricle. A diffuse gelatinous deposit covered the base about the optic commissure and tracts and about the points of emergence of the crura, also the under surface of the pons, and to a slight extent the medulla, also the peduncles of the cerebellum and the region of the cerebellum contiguous to the pons. This deposit was in places three millimetres thick, translucent, non-vascular, tenacious within the meshes of the pia mater, and with that membrane readily stripped from subjacent tissues—in many places its surface imparted to the finger a sensation of "smooth sand." The pons was compressed into a polygonal shape by the serous exudation, and its tissue was very hard; on section the pons and medulla appeared to be normal, with the exception of a dilated iter. The pia mater, on the convolutions at the base of the frontal, temporal, and occipital lobes, in the neighborhood of the gummy deposit, and especially about the optic commissure and between the olfactory tracts, was studded with miliary deposits of grayish-white color, not connected with the vessels, apparently beneath the pia yet stripping off with it. Convexity and substance of cerebrum normal. Lateral ventricles dilated. Ependyma of all the ventricles normal. No other viscera were examined.

Remarks.—It appears that the father contracted syphilis in 1877 (six and a half years ago, five and a half years before birth of this child). He was treated early and continuously for several years, and his symptoms have been mild, comprising induration of inguinal glands, erythematous and later small papular syphiloderm, and sore throat, all slight and transient and within the first eighteen months. About one year later infection of the mother occurred, and she was admitted to Roosevelt Hospital in July, 1878 (four and a half years before the birth of this child). She was treated for chancroidal (?) ulceration of the genitals and a syphilitic ulcer of the right forearm near the elbow, nine weeks in duration; about six weeks later she had an eruption and lost most of the soft palate by ulceration. Two and a half years ago she again had sore throat, ulcers on her legs, and at the same

time she lost the nasal septum and cartilage by ulceration. Since then she has had no symptoms and she now seems entirely well. Her treatment has been very imperfect and irregular. She has never had a miscarriage. During the first year of the mother's infection a child was born who is now living. He was quite healthy at birth, but nine or ten months later he had ulcers on his body and onychia. He is now strong and well-nourished but perhaps a little under size. The child from whom these specimens were taken was born during the fifth year of the mother's infection, more than a year subsequent to her final syphilitic manifestations. There were no lesions at birth, and when first seen by me the child appeared thoroughly well nourished. The teeth were normal in evolution, shape, and size, and the mother insisted that the child had never had any skin eruption or other sickness.

Microscopical examination made by Dr. Amidon. The tubercles consisted of collections of lymphoid cells, the central portion of the collections being dense and opaque. There is a general infiltration of the pia mater (at the base) with large polyhedral cells, larger than white blood-corpuscles. The translucent material at the base of the brain consisted of loose connective tissue holding the same cells in its meshes.

Dr. Amidon said that the case was interesting to him especially on account of the family history. It was supposed that the cerebral trouble was undoubtedly syphilitic in character, and, at the autopsy, the gross appearances resembled those given by syphilitic rather than tubercular lesions; but the microscope revealed that the lesions were tubercular. The existence of miliary collections of small cells over the base of the brain should have convinced them that the case was one of tubercular meningitis, but the clinical history differed so much from that ordinarily met with in tubercular meningitis, that it, together with the peculiar gross appearances, misled him.

Dr. Northrup remarked that nystagmus and the peculiar motion of the limbs noted were not uncommon in general tuberculosis; so also the gelatinous exudation at the base of the brain. He regarded the case as unusually interesting in connection with the syphilitic history.

Dr. Peabody said that the case was interesting to him because he saw a similar one last winter, occurring in an adult, in whom there was a distinct syphilitic history. As he recalled it there was no peculiarity in the symptoms.

At the autopsy he found a gelatinous exudation covering the base of the brain, and extending down upon the anterior portion of the cord, from an eighth to a sixteenth of an inch thick, but with it no pus whatever. Microscopical examination failed to reveal any tubercles, but in the neighborhood of the thick exudation he found considerable perivasculitis and evidence of arteritis obliterans, and the combination led him to believe it to be syphilitic in character. He thought it perfectly possible that in Dr. Knight's case syphilis and tubercular meningitis co-existed.

Dr. Northrup remarked that in well-developed tubercular meningitis a gelatinous layer at the base of the brain was found usually, and it was very apt to be tinged with a green color. He had always regarded this condition as one of œdema of the pia with a small quantity of pus.

Dr. Van Gieson thought that the case ran a short course for one of tubercular meningitis. A gelatiniform exudation is not infrequently seen in such cases, and he was of the opinion that the quantity depended upon the intensity of the inflammation excited by the tubercular deposit. Chemically it was nothing more nor less than coagulated liquor sanguinis. He had not noticed the greenish tinge spoken of, but where there was marked congestion there had been, more frequently, the gelatiniform exudation.

With regard to the question whether or not syphilis may have been an etiological factor in the case, Dr. Van Gieson thought that in children it could be assumed with a great degree of certainty of being true, that syphilitic lesions of the skin will manifest themselves before cerebral symptoms develop, and as the skin in Dr. Knight's case showed no lesions, he should be inclined to eliminate the syphilitic element from the history; that view was also favored by the age of the patient.

Dr. Amidon asked if the temperature was not low for tubercular meningitis.

Dr. Van Gieson said he had seen quite a large number of cases of tubercular meningitis, and he had had one in which the disease ran its course, and terminated fatally, and the temperature at no time was above 100° F., taken in the rectum with corrected thermometers; the general manifestations of the disease were extremely characteristic. Whenever he was called to see a young child, complaining of headache, lassitude, loss of appetite, with grating of the teeth at night, etc., and a temperature of 99° F., he at once suspected, from the very fact that the temperature was low, that the life of the child was in danger, and that if there was to be a rise of temperature it was apt to be preagonistic.

Dr. Amidon regarded the temperature in Dr. Knight's case as belonging to syphilis rather than to meningitis, and fully believed that in ALL cases of meningitis, rise of temperature occurred before death.

Dr. Van Gieson believed that cases of tubercular meningitis occurred, not uncommonly, in which there were only slight exacerbations of temperature. In deciding the question of temperature, he regarded it as important that the thermometer should be introduced into the rectum, and allowed to remain for at least five minutes.

TUBERCULAR MENINGITIS.

Dr. R. W. Amidon presented microscopic slides with the following history: Female child, aged seventeen months. Maternal grandmother died of chronic pulmonary trouble, after the age of fifty years. Some of the grandmother's brothers died of phthisis when younger. Maternal aunt died recently of combined cardiac and pulmonary disease. Child's parents subject to colds.

The child had never been sick before. Was nursed by mother until over a year old. Was rather apt to take colds. Had a good deal of trouble with first few teeth. Had begun to walk alone, also talked some. Was a normally bright child.

About March 15, 1884, began to cut some back teeth, which seemed to cause much irritation. A week later became irritable, disinclined to play, and resumed creeping. Wouldn't walk, wanted to be let alone, and liked to lie down. All the time constipated. Ate well. About March 24th bored pillow a good deal. Four days ago was some irritation about right ear, which child rubbed a good deal. March 26th the left ear was likewise irritated. The child was treated for "teething," and had been given an unknown amount of hyoscyamine.

I was called to see the case at half past nine on the morning of April 5th. I then elicited the preceding history. I learned that after a good night's rest the child woke conscious, and immediately (7 A.M.) was seized with general convulsions, commencing with twitching of the face. Spells of clonic spasms of the face and extremities occurred at intervals from this time on. There was loss of consciousness, eyes open, fixed and to the right, was feverish before the convulsions. When first seen there was conjugate deviation to the right, eyes open and fixed, pupils dilated (hyoscyamia) and equal, slight occasional twitching about the left angle of the mouth and almost continuous slight twitchings in muscles of legs and fore-arms. Respiration, 60; pulse not perceptible at the wrist, because of tendinous twitchings; very hot and bathed in warm perspiration. 10.12 A.M.: temperature in left axilla, 41.5° C. (106° F.). 10.32: pulse, 120. 10.40: respiration, 34; temperature, 40.75° C.; began to give chloral hydrate hypodermically in .10 (two grains) doses, at intervals of ten minutes. This

seemed to check the convulsions. 10.55: pulse, 108; respiration, croupy and 36. 11.40: pulse, 80; respiration, 76; temperature, 40.75° C. Died about noon.

An autopsy revealed the pia of the base of the brain studded with miliary tubercules. Rest of the body not examined.

Dr. J. C. Peters had found the primary symptoms of tubercular meningitis more variable than of almost any other disease he had been called upon to treat. Some cases at the outset resembled remittent fever; in others there was merely a slight stiffening of the neck in the morning, which passed off in the afternoon; in some, projectile vomiting occurred without other symptoms, and as almost any of the nerves given off at the base of the brain were liable to be involved, a very great variety of symptoms could be established. He knew of no disease which presented difficulty in diagnosis for the first four or five days equal with that offered by tubercular meningits.

Dr. J. Lewis Smith thought the temperature depended upon the existence of meningitis. Tubercles might exist without meningitis, and without elevation of temperature, except, perhaps, a rise in the afternoon. If the meningitis was moderate, the febrile movement would be mild. He could coincide with Dr. Peters' remarks, and knew of no disease of childhood which was more difficult to diagnosticate at the beginning than tubercular meningitis.

AORTIC ANEURISM—ULCERATIVE ENDARTERITIS—AORTIC INSUFFICIENCY—CONGENITAL ANOMALIES OF THE LIVER.

Dr. Frank Ferguson presented specimens illustrating the above lesions removed from a male, fourteen years of age, and born in the United States. Only a few facts of the patient's history could be obtained. He did not give any rheumatic history. He had slight cough for some months. Two months previous to his admission into the New York Hospital on May 6, 1884, he complained of shortness of breath, weakness, loss of appetite, and he became pale and listless. On admission he was fairly nourished; there was no œdema of ankles and legs; face looked puffy; he was anæmic and cachectic. He was very dyspnoic and his respiration was largely diaphragmatic. His cardiac action was rapid and very irregular. The precordial area was increased; the apex-beat in the fifth space and nipple line. There was a harsh murmur, with the maximum of intensity at the apex of the heart, and heard with and after the first sound. In the third space, just to the left of the sternum, a soft bruit was heard with the first sound. The second sound was reduplicated. He quietly died two days after admission.

The *heart* is larger than normally found in subjects of this age; its cavities are dilated, and endocardium is thickened. There are vegetations on the segments of the aortic valve, some of them calcareous. One of the segments is almost entirely destroyed. Just above the attachment of the destroyed cusp there is a small round smooth opening in the wall of the aorta, communicating with a sac half an inch in diameter, with smooth walls situated in the upper and anterior part of the inter-ventricular septum.

Above this aneurismal sac there are several small irregular ulcers in the wall of the aorta, and one large ulcer, half an inch in diameter, with smooth bottom, and edges covered with vegetation.

The *liver* is ovoidal in shape, left lobe is rudimentary; there are three nodules of liver tissue on the under surface of the right lobe. The location of the gall-bladder is normal, but the fundus of the bladder is partially divided by a septum; the organ instead of being ovoidal or pyriform, is triangular in shape. The microscopic examination of the liver shows those changes which occur with cardiac valvular lesions.

The spleen was large, firm, and pigmented. The kidneys were larger than normal, firm and congested. The lungs were congested and pigmented—the condition of brown induration. The stomach was congested; also the mucous membrane of the intestines.

CHRONIC FIBROUS MYOCARDITIS.

Dr. George L. Peabody presented a heart removed from the body of a German woman, fifty-six years of age, who died in the New York Hospital, having been under observation about two weeks. The clinical history was meagre. The patient had borne several children, and had been in comparatively good health up to four months before her admission, except that without known cause she began to suffer from palpitation of the heart twelve years ago, and had suffered from it, at intervals, since that date. Four months ago she had an attack of pneumonia which ran a rather protracted course, but from which she recovered completely. She entered the hospital with dyspnœa, œdema of the lower extremities and lower half of the abdominal walls, and also with marked ascites. The chief subjective symptom was dyspnœa. When she entered, she was passing about the normal quantity of urine, but the quantity then diminished, and it contained albumen and hyaline and granular casts in abundance, and had a low specific gravity throughout. At the autopsy the kidneys presented the combined lesions of parenchymatous and interstitial nephritis, and the liver was found dislocated entirely below the free border of the ribs.

The chief interest centred in the condition of the heart, which contained a large amount of fibrous tissue, especially in the muscle about the apex, where the walls were very thin. Microscopic examination showed that, in the immediate neighborhood of the patches of distinctly fibrillated white fibrous tissue, there was distinct fatty degeneration of the muscular tissue, but beyond that the muscular wall was substantially normal. The endocardium was everywhere thickened, the attached borders of the aortic cusps were thickened, and there was atheroma in the aorta surrounding the opening of the coronary arteries, and also about the mitral valve.

Dr. Peabody remarked that he had not found fibrous myocarditis without atheroma in the coronary arteries.

There was a slight degree of cirrhosis and 2,500 cubic centimetres of fluid in the peritoneal cavity. Clinically, Dr. Peabody thought that this form of hypertrophy without valvular lesion gave the patient greater distress than any other.

Dr. Van Gieson asked Dr. Peabody if in such or similar cases he had observed symptoms of angina pectoris, as with calcification of the coronary arteries.

Dr. Peabody replied that he had seen two cases.

Dr. J. C. Peters had seen two specimens in which there was almost complete obstruction of the coronary arteries from atheroma, the patients having suffered from angina pectoris. Both patients died suddenly. In one there was rupture of the left ventricle.

Dr. Ferguson had had a case, within the last month, of large aneurism of the heart involving a part of the septum, and in which there was extensive interstitial myocarditis with some granulo-fatty change in the muscular fibre, but not distinct, and both coronary arteries had been almost completely obliterated by the lesion of endarteritis obliterans; there was no atheroma. The history of the case extended over eighteen months and the patient was seventy-six years of age.

Dr. Levi remarked that he had been taught that calcification and atheroma were two distinct conditions.

Dr. Peabody remarked that they did not necessarily pass into each other, but he thought that atheroma sometimes preceded calcification.

The Society then went into executive session.

A Munificent Gift.—St. George's Hospital, London, has recently received a bequest of $500,000 from the late Mr. William King.

THE PARIS ACADEMY OF MEDICINE.

Stated Meeting, June 10, 1884.

M. Alphonse Guérin, President, in the Chair.

(Special Report for The Medical Record.)

The Academy was called to order by the President, who announced the death of Mme. Richet, and expressed the sympathy of the members for M. Richet in his affliction.

M. A. Fournier presented a communication in behalf of M. Duclaux upon

THE MICROBE OF THE BISKRA BUTTON.

The coccus in question was obtained from the blood of a patient suffering from the Aleppo evil. It was found equally in the blood flowing from a puncture made in the immediate neighborhood of the boil, and in the general circulation. When introduced into the circulation of a rabbit there ensued a chronic disease, characterized by successive crops of boils, gangrenous at their apices, either scattered irregularly over the entire surface of the body, or grouped together, or sometimes even confluent. In general appearance they bore a close resemblance to the Biskra button. The rabbits, during this period of eruption, became thin and their fur was rough, though they continued to eat. After a while the boils disappeared and the animals recovered their usual health. In one case the eruption began ten days after the inoculation and continued a month.

Some further experiments were made with a view to determine the results of the

CULTIVATION OF THE COCCUS

in concentrated veal bouillon. The effects of the injection of the culture-fluid were found to vary according to the age of the cultivation and the mode of injection.

When injected under the skin in the dose of twenty drops, during the first days of the culture, extensive gangrene was caused. Later, when the fluid was about ten days old, the gangrene was of limited extent. Later still, localized phlegmons only were observed. And finally, two months or more after the commencement of the cultivation, the results obtained were negative.

When the fluid was injected directly into a vein death ensued at a period after the inoculation varying in length according to the age of the culture-fluid. After two months or more had elapsed, injection into the veins gave no results. But if a drop of this weakened culture-fluid were added to fresh bouillon, the evidence reappeared, becoming gradually less and less as in the first series of experiments.

M. Legouest remarked that the disease produced in the rabbit by these inoculations resembled in no way the Biskra button as seen in man. In the former case the eruption was said to have lasted a month, but in man the course of the Aleppo evil is of much longer duration. For this and other reasons he doubted whether it was the same disease in the two cases.

M. Blot inquired as to the number of times these experiments were repeated by M. Duclaux.

M. Fournier was unable to state positively, but did not doubt that they had been repeated a sufficient number of times. He was certain that the disease produced was really the Aleppo evil, and thought it not at all to be wondered at that its manifestations in the rabbit should differ from those in man.

M. Colin thought that the experiments, having been made on rabbits only, were by no means conclusive. If twenty drops of any kind of freshly prepared bouillon are injected into a rabbit, extensive gangrene and death by septicæmia may result. Later, when the animal matters of the fluid are destroyed by putrefaction, it may be injected with impunity. If now fresh bouillon is again used, whether a drop of the old fluid be added or not, we see the former series of results repeated. In order to be conclusive, the injections should be practised on larger animals, such as the horse or the ass.

M. Larrey agreed with M. Legouest that the disease described as having been produced in rabbits by inoculation with this coccus did not resemble at all the Aleppo evil as it occurs in man.

M. Bouley defended the author of the paper from the charge of having confounded the effects of septicæmia with those of the micrococcus of the Biskra button. Each animal reacts after its own fashion in the presence of a microbe, and it could not be expected that the symptoms of the disease in the rabbit should be the same as those met with in the human being. He thought the experiments of M. Duclaux were particularly interesting as showing how the microbe, having exhausted the nutritive elements in one solution, is able to regain new vigor when transplanted to a freshly prepared bouillon.

A memoir was then read by M. Du Mesnil, candidate for the title of Corresponding Member, on

CONCUSSION OF THE SPINAL CORD, SCLEROSIS OF THE LATERAL COLUMNS, AND DEGENERATION OF THE CELLS OF THE GRAY SUBSTANCE.

His conclusions were that: 1, Concussion of the spinal cord is a condition the existence of which, in the present state of science, ought to be maintained; 2, it may be the starting-point for secondary inflammatory lesions; 3, these inflammatory lesions may assume the form of circumscribed myelosclerosis.

M. Léon Labbé then read a paper entitled

INTRA-ARTICULAR IRRIGATION WITH CARBOLIZED WATER IN THE TREATMENT OF CHRONIC HYDRARTHROSIS.

After reviewing briefly the various attempts made to cure chronic hydrarthrosis by intra-articular injections of different substances, the author described the procedure known as Schède's operation. This consists in puncturing the articulation with a trocar of wide calibre, forcing out the fluid, and then injecting a three to five per cent. solution of phenic acid. A large quantity of the solution is used, and the injections are repeated until the water flows away perfectly clear. The wound made by the trocar is then sealed with gold-beaters' skin and collodion, the joint is enveloped in a thick layer of wadding, and the limb is immobilized in a guttered splint. Strict antiseptic precautions are observed, and the greatest care is taken to prevent the entrance of air into the articulation during the operation. The author had seen Schède perform this operation, and had himself operated upon two patients with success.

M. Jules Guérin regretted that M. Labbé, in his review of other modes of treatment, had not mentioned the one which had given in general the best results of any. This method, which he had employed for a period of thirty-five years, was divided into three parts, corresponding to the three stages of the disease. At the commencement of the disease, the treatment from which the best results are obtained is by vesication. Later, when the affection has lost in a measure its acute character, cold water is indicated. Finally, in the third and chronic stage, the treatment by means of

PUNCTATE CAUTERIZATIONS

is the one which is the most effectual in overcoming the disease. These cauterizations are a matter of every-day occurrence now, but it was far otherwise thirty or more years ago.

M. Colin claimed that the veterinary surgeons were the first to make use of the cautery in the treatment of joint diseases, and that the surgeons of to-day were merely imitators of the veterinarians in this respect.

M. Guérin said that punctate cauterization was a very different procedure from burning by hot irons as practised by veterinary surgeons. In the former case the burn was very superficial and never caused suppuration. Punctate cauterization, therefore, both in its mode of employment and in its effects, was essentially a new method.

The Academy then adjourned.

THE ROYAL IMPERIAL MEDICAL SOCIETY OF VIENNA.

Stated Meeting, May 30, 1884.

PROFESSOR LEIDESDORF, PRESIDENT, IN THE CHAIR.

(Special Report for THE MEDICAL RECORD.)

THE Society having been called to order by the President, DR. HOFMOKL exhibited some patients upon whom he had recently operated. The first case was one showing the results of

OSTEOTOMY OF THE FEMUR

for knock-knee. The operation was performed after Massini's method, and resulted in a perfect correction of the deformity.

The second patient had suffered for twelve years from symptoms of

VESICAL CALCULUS.

The median operation was performed, and an enormous stone was removed after crushing. It had nearly filled the bladder. It was composed chiefly of lime salts with a nucleus of uric acid. The patient was now well, except that he was unable to retain his water for any great length of time because of the paresis of the bladder, which still existed.

A third patient was shown, who suffered from

REPEATED BREAKING DOWN OF A CICATRIX.

A stone had been removed from his bladder by the high operation three years before. Since that time the cicatrix had yielded seven different times. There was no stricture of the urethra discoverable, though there was always considerable straining in passing water. When the cicatrix was about to break, it would be seen to swell out like a toy balloon, would then burst, and the urine would flow out through the anterior abdominal wall. These repeated occurrences had become almost unbearable, and the patient had already made one attempt to take his own life.

PROFESSOR V. DITTEL exhibited to the Society an apparatus, devised by Dr. Silbermann, of Breslau, for the

TEMPORARY CLOSURE OF ONE URETER.

It is a matter of great importance to the surgeon contemplating the removal of a kidney to determine whether the other is healthy and capable of secreting urine. It has hitherto been nearly impossible to determine this with any certainty owing to the difficulty of obtaining the urine of one kidney unmixed with the secretion of the other. The attempt has been made to catheterize the ureter, and has been successful in the case of women after dilatation of the urethra, but in man this is impossible. Dr. Silbermann's instrument consists of a catheter (No. 18 French) provided with a large opening $1\frac{5}{8}$ inches long, upon the side, and several small holes at its extremity. The instrument having been introduced, the eye being covered so as not to injure the walls of the urethra, a smaller canula is passed through. This small tube is provided with a rubber ball at its extremity, which, when in position, lies directly in the eye of the catheter. The instrument being so turned that this part lies against the mouth of the ureter, mercury is forced through the inner tube, dilating the rubber ball and effectually closing the orifice. Thus the urine that passes into the bladder can come from one ureter only, and a few minutes will suffice to show whether the corresponding kidney is performing its functions normally. The instrument has been tried several times in healthy individuals and has been found to answer the purpose intended.

PROFESSOR MAUTHNER then exhibited a patient with

OPHTHALMOPLEGIA INTERIOR,

or paralysis of the muscle of accommodation and sphincter iridis, with preservation of function of the external muscles of the eye. After the reading of a paper on

CEPHALOMETRY AND CRANIOMETRY

by PROFESSOR BENEDIKT, the Society adjourned.

THE BERLIN SOCIETY OF INTERNAL MEDICINE.

Stated Meeting, May 26, 1884.

HERR LEYDEN, PRESIDENT, IN THE CHAIR.

(Special Report for THE MEDICAL RECORD.)

THE first paper of the evening was read by HERR G. BEHREND upon the

NATURE OF PRURIGO.

The author took exception to the teaching of the Vienna school that skin diseases are essentially local affections, and maintained that they may arise from changes in the blood, or may be symptoms of some general disease. In proof of this position he cited the eruptions that are often seen to follow the long-continued use of certain drugs, and those occurring in nephritis, or in the exanthematous diseases. These eruptions, he stated, are independent of the nature and specific action of the matters under whose influence they arise. Hence they may be called, and were so called by the author himself, in his work on dermatology,

HÆMATOGENETIC ERUPTIONS OF THE SKIN.

No direct evidences of the hæmatogenetic origin of prurigo have hitherto been forthcoming, but the speaker had recently observed two cases which seemed to supply the omission.

The first was that of a child, seven and a half years of age, who had had scarlatina some two years and a half ago. It had previously been a healthy child with a complexion free from any appearance of eruption. Just as the desquamatory stage was at an end there was a thick eruption of pustules, most noticeable on the lower extremities, but present also on the body and arms. As these pustules dried a new crop appeared, and then another, and another for some eight or ten weeks. When this pustular eruption ceased a prurigo appeared, and still existed at the time of the report. The eruption occupied the extensor surfaces of the articulations chiefly, and was entirely absent from the flexor surfaces. There was also some pigmentation of the skin, and swelling of the inguinal glands.

The second case was a seven-year-old boy, who had had scarlet fever and secondary nephritis three years previously. When first seen some months after the subsidence of the original disease, he was suffering from well-marked and typical prurigo. The mother stated that a pustular eruption was first seen, which gradually disappeared and gave place to the prurigo.

The speaker maintained that the scarlatinal poison had first given occasion to the development of the prurigo, though the latter had remained after the cause had been removed from the system. A similar occurrence is seen in the persistence of an eczema, following vaccination, long after the influence of the vaccine virus upon the organism has ceased.

HERR LEWINSKI thought the prurigo was due to the inflammation of the skin accompanying scarlatina rather than to the scarlatinal poison.

HERR BEHREND rejected this view and maintained that the localization of the eruption upon the extensor surfaces of the joints, as well as the pigmentation of the skin, were sufficient to establish the correctness of his diagnosis. He regarded the pustular eruption as the transition stage between scarlatina and prurigo.

HERR KRONECKER presented an account of some experiments made by himself and Herr Schmey, in the course of which they had accidentally discovered the

CENTRE OF CO-ORDINATION FOR THE VENTRICULAR PULSATIONS.

The experiments were being conducted with a view of establishing the mode of contraction of the ventricles. A dog was put under the influence of curare, artificial respiration being maintained while the heart was exposed and raised up to the opening in the thorax. The reg-

istering apparatus being ready, Herr Kronecker thrust a needle into the heart in order to record its movements. At that instant the ventricles ceased pulsating, dilated, and presented only irregular fibrillary twitchings. The needle was removed at once and the heart was kneaded, but without avail. The auricles continued to pulsate, but the animal died without a single beat of the ventricles occurring. This accident led to further investigations, in which the experimenters found that an injury to the cardiac wall at a certain point invariably caused paralysis of the ventricles. This point, the limits of which were not yet exactly mapped out, was over the lower boundary of the upper third of the ventricular septum near the descending branch of the left coronary artery. Here, then, must be the distributing point for the nerve-supply, the part where the messages to the different muscular fibres are arranged and co-ordinated, so that each portion of the ventricular wall shall contract in harmony with every other portion. When this centre is destroyed the separate muscular bundles do not contract with less force but irregularly.

Experiments were also made to determine the effects of irritation upon this newly-discovered co-ordinating centre. It was found that a very weak induced current passed through this point was sufficient to arrest the rhythmic pulsations of the ventricle. But if the electrodes were placed at a distance from this centre it required a current of much greater strength to produce the same effect. Herr Kronecker thought that the cases of sudden death from

PARALYSIS OF THE HEART

were to be explained through this excessive vulnerability of the co-ordinating centre In sclerosis of the coronary arteries, fatty degeneration, and sometimes during convalescence from acute diseases, sudden death from paralysis of the heart has been observed. In such cases the individual may breathe several times after the cardiac pulsations are no longer perceptible. It is fortunate that this centre is situated in a part of the ventricular wall so well protected from external injuries.

In concluding, the speaker reminded his hearers that these experiments were made upon dogs only, and it was very probable that the centre of co-ordination in the animals of a lower order was not so strictly defined. This should be borne in mind if similar experiments were made on rabbits or frogs, otherwise the results obtained might appear to conflict with his own.

The Society then adjourned.

A Criticism from India on the Cholera Bacillus.—The *Indian Medical Gazette*, in the course of an elaborate review of Koch's work and discovery, says: "A review of the whole evidence brought forward by the German Cholera Commission shows that they have only succeeded in establishing the fact that a peculiar form of bacillus is normal to the intestines of cholera patients; but the exact part which this organism plays in the morbid process is left wholly undetermined. Only a very moderate degree of probability has been made out in favor of this bacillus being the cause of cholera; but the futility of trusting to probabilities and conjecture in an etiological inquiry into cholera is generally well recognized. The problem, therefore, of the causation of cholera still remaining unsolved, it awaits and ought to receive that careful attention which its great importance demands." It is not fair to depreciate the value of Koch's discovery; but, on the other hand, it will do no good to give to it any greater weight than the evidence strictly justifies.

The Number of the Blind in Russia is unusually great, amounting in some districts to .2 per cent. of the population.

THE THERAPEUTICAL SOCIETY OF PARIS.

Stated Meeting, May 28, 1884.

M. Delpech, President, in the Chair.

(Special Report for The Medical Record.)

After the Society had been called to order, M. Petit exhibited some specimens of

EUPHORBIA PILULIFERA.

This plant, which resembles the ordinary wartwort (*réveille-matin*), grows in stony places in the neighborhood of Brisbane, Australia. It is used in that country and in England in asthma and all chronic spasmodic bronchial affections. An infusion is made of one ounce of the fresh plant in three and a half pints of water, of which the dose is a glassful morning and evening. M. Petit offered to furnish samples of the dried plant to any of the members who might desire to experiment with it.

M. E. Labbé continued some remarks which he had made at the previous meeting upon the properties of

OZONIFACIENT WATER.

This product, which may be extracted from the *pinus maritima*, was discovered by M. Boursier, and is really a

TEREBINTHINE HYDRATE.

Its ozonifacient properties give to it a special value as a disinfectant. It may be used in the form of spray, vapor, or as a liquid. If the spray be directed over any putrefying and foul-smelling material the fetid odor is at once destroyed. The vapor possesses a terebinthinate odor, and would seem to be indicated in the case of fetid expectoration. The vapor is certainly absorbed by the respiratory mucous membrane, for when inhaled for any length of time symptoms of intoxication are produced. In the

TREATMENT OF DIPHTHERIA

a wash of ozonifacient water has appeared to give good results, but the trials of the remedy in this disease have been too few to allow of any definite conclusions. Compresses wet with the substance and applied to any surface giving off a fetid secretion are productive of good results. The speaker thought that this product, owing to its cheapness and the small quantities which it is necessary to employ, was destined to assume the first rank among the disinfectants.

M. Blondeau remarked upon the strong terebinthinate odor of the substance, and suggested that it owed its disinfectant properties to the turpentine which it contained.

M. Labbé maintained that turpentine had no such ozone-producing properties as the product in question was shown to possess.

M. Dujardin-Beaumetz exhibited some fresh and dried specimens of the

KOLA NUT,

the fruit of the *sterculia acuminata*, a tree growing in Central Africa. The natives look upon it as a universal cure-all, and attribute to it tonic, nutritive, excitant, and aphrodisiac properties. Analysis shows that kola contains caffeine and tannin in large proportions and a relatively less amount of theobromine. It has been used with success in the diarrhœas of hot climates, in cardiac diseases, and as a tonic.

M. Petit asked whether the beneficial effects of the kola nut were not due to the caffeine contained in it, and thought, if this were so, it would be much better to use the latter drug by itself than to give it mixed with other inert substances in the form of kola preparations.

M. Dujardin-Beaumetz then made a few remarks upon

HAMAMELIS VIRGINIANA.

He said that, while not agreeing with those who thought no substance could possess valuable therapeutic properties which was not poisonous in large doses, he must

nevertheless say that he had never been able to observe even any physiological effects from witch-hazel.

M. Campardon related two instances in which he had observed a gradual

DECOLORATION OF PIGMENTED SPOTS,

due to varicose veins, following the internal administration of an infusion of hamamelis. In neither case was the remedy applied locally.

After some further remarks by the members regarding the parts of the plant in which the active principle was contained, the Society adjourned.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

SIR JAMES PAGET'S ADDRESS AT THE HEALTH EXHIBITION—THE CONSERVATORSHIP OF THE COLLEGE OF SURGEONS—BURIAL ALIVE—OVERPRESSURE IN SCHOOLS—STATE OF THE THAMES—SMALL-POX IN LONDON—CONFERENCE ON SANITARY LEGISLATION.

London, June 21, 1884.

On Tuesday last, June 17th, the Prince of Wales paid his first visit to the International Health Exhibition, and on this occasion an address was delivered by Sir James Paget in his usual felicitous manner. Sir James deprecated mere comfortable idle health. The pattern healthy man was, he said, one who lived long and vigorously; who in every part of his life did the largest amount he could of the best work, and when he died, left healthy offspring.

Referring to published statistics, Sir James Paget pointed out some striking facts. He estimated that in this country the whole population between fifteen and sixty-five years of age do, in each year, twenty million weeks' less work owing to sickness. He remarked that typhoid fever alone destroyed 4,000 working people a year in England and Wales. From this one preventable disease we had an annual loss of 230,000 weeks' work from illness. Referring to infantile mortality Sir James remarked that in 1882 the mortality of children under fifteen was nearly a quarter of a million. If you reckoned that each child cost only £8, more than two million pounds sterling were thus lost every year. But they had cost much more, and much more still was lost by the loss of the work they might have lived to do. The numerous diseases that might be prevented by suitable precautions were then referred to, and Sir James Paget concluded by urging that we wanted more ambition for renown in health. He would like to see a personal ambition for renown in health as keen as that for bravery, or for beauty, or for success in our athletic games and field sports; as for national renown in war, or in arts or commerce.

Mr. Stewart, of St. Thomas' Hospital, has been elected to the Conservatorship of the College of Surgeons, vacant through the resignation of Professor Flower, who was appointed to the Natural History Museum some months since.

A controversy has been going on lately in the columns of *The Lancet* as to the possibility of persons being buried alive. Some of the correspondents deny the possibility of this occurrence altogether. Some of the facts narrated by others seem to show that it has occurred even in the present century. It is very pertinently pointed out that burial should not be permitted till some signs of decomposition have appeared. A good deal of discussion took place some years ago as to various "signs of death," but no more reliable sign, and one of such easy application, has as yet been pointed out.

Overpressure in education is again denounced by sanitary authorities. The system of payment by results seems partly to blame in Board Schools. This makes it the direct interest of the teachers to force as many pupils as possible up to a given standard, and tends to press hardly on the weaker or duller members of a class. But overwork is not confined to Board Schools, nor to students of tender age. Every now and then we hear of suicides among university and other students attributed to overwork for competitive and other examinations.

The condition of the Thames during the last week is presumably due to the unusual dryness of the season. Between Twickenham and Kew the bed of the river has been exposed at low water, and children have actually crossed on foot from one side to the other. The river is said to be getting shallower day by day. Should this prove to be the case, the intra-metropolitan portion of the stream can scarcely fail to be affected. The stagnation of sewage at Barking and Crossness will probably become more offensive, and other dangers to health are likely to ensue.

Small-pox is still on the increase in London. Last week (ending June 14th) the number of patients under treatment in the hospitals, hospital-ships, and convalescent camp of the Metropolitan Asylums Board rose to 1,238, being an increase of 142 on the preceding week. The number of new cases admitted during the week was 332. Owing to the further increase in the number of patients under treatment, it has been found necessary to lease a hospital belonging to the Poplar Board of Works. It is cheering to note that the deaths from small-pox in London during the same week were only 30 in number.

A Conference on sanitary legislation will be held next week at the Health Exhibition. It will last two days, and be under the auspices of the Social Science Association.

OUR PARIS LETTER.

(From our Special Correspondent.)

REMOVAL OF CONTAGIOUS DISEASES TO HOSPITALS—HOW IT IS DONE IN PARIS—THE NEW METHOD FOR THE TRANSFUSION OF BLOOD—A CURIOUS CASE OF MALINGERING—HOW A THERMOMETER WAS TAMPERED WITH.

Paris, June 20, 1884.

A very useful measure has been taken by the Prefect of police with reference to the removal of persons suffering from contagious diseases to the hospitals from their own homes. Special carriages have been constructed for the purpose which are kept at the Hôtel Dieu, and he has informed the commissaries of police of each district that all that will be required is a medical certificate as to the nature of the malady of the applicant, giving his name and address. These carriages are placed at the disposal of the public daily from 8 A.M. to 6 P.M., and in order to get one application must be made to the commissary of police of the quarter in which the patient resides, or to the central police office of the district. No charge will be made for the use of these carriages, and the commissaries of police are further instructed thoroughly to disinfect the carriages after each journey, and also to disinfect the room from which the patient has been removed. Hitherto these carriages were reserved for small-pox patients only, but they are now to be available for all contagious or epidemic maladies, such as small-pox, scarlet fever, measles, diphtheria, etc. This, as I have said, is certainly a very useful measure, but unless the public are made acquainted with such an arrangement in a more efficient manner these carriages will scarcely ever be called into requisition, as has happened with the ambulance-carriage reserved for small-pox patients, as the public being ignorant of its existence for the last two years, it is reported that it was taken advantage of only ten times during that period.

At a recent meeting of the Academy of Sciences Professor Vulpian read a paper for M. Afanassiew, a Russian physiologist, on a new method for the transfusion of blood, which consists of peptonizing the latter, by which means its coagulability is suppressed for a certain time.

M. Afanassiew acquired the knowledge of this fact by experiments he had performed on dogs, from which he removed two-thirds of their blood, which reduced them to death's door. In injecting into their veins blood mixed with peptones, he was enabled to restore them to life. According to the author these peptones do not in any way affect the globular elements of the blood; the peptones simply prevent coagulation, and thus render useless the process of defibrination before injecting the blood. M. Afanassiew promises to continue his experiments on animals before venturing to apply his new method to man.

A very curious case of malingering was recently brought to the notice of the Société Médicale des Hôpitaux by Dr. Du Castel, which was detected in a young woman in a hospital under the following circumstances: She was admitted for a herpetic disease of the throat, and in going into her previous history she stated that she had had an attack of pneumonia, which, however, was considered doubtful, as she had recently had an attack of hæmoptysis. She had never had convulsions. At the end of five or six days, the sore throat was almost completely cured, and the temperature of her body, which had risen to 39.5° C., fell to nearly normal; but she was seized with an attack of delirium followed by great excitement which lasted several hours. A few days later, the patient declared that she had spit up a good deal of "thick matter" during the night, which nobody saw, as she had emptied her spittoon before the doctor's visit. Soon after this, she presented symptoms of coma, accompanied with a slight increase of the temperature. This was followed by complete paraplegia accompanied with generalized hyperæsthesia. Finally followed a series of hysteriform attacks, distinctly marked aphasia, mutism, etc., the thermometer ranging at this time from 39° C. to 39.5° C. The physician hesitated in his diagnosis of hysteria, and he felt inclined to ask himself whether, owing to the deafness which existed during the attack of sore throat followed by spitting up of matter (?), there was not some lesion of the internal ear complicated with cerebral abscess. This state of uncertainty lasted some time, when one morning the interne charged to take the temperature of the patient observed to his surprise that the thermometer marked 43.4° C. It was imagined that there might have been some error, and the temperature was again taken, when the thermometer marked 39°. Eight days later the thermometer marked 43° and a few tenths, then the temperature remained for a few days after about 39°. One morning the thermometer marked 44°. This naturally puzzled the interne and the physician, when it was resolved to examine all the thermometers of the ward, but nothing wrong was detected; nevertheless the temperature as taken each day was sometimes 38°, sometimes 43°, and sometimes 39° C., but the rise or fall was the same whether the thermometer was applied to the axilla or in the vagina, and the thermometer had even risen to 48°. Suspecting some trickery on the part of the patient, she was closely watched, and as it appeared to the physician that as the patient got the mercury to rise so high he saw no reason why she should not succeed in getting it to rise even higher, and as the ordinary clinical thermometer was not long enough, he used a stove thermometer marking as high as 160° Centigrade, and to his great confusion, and that of his assistants, this thermometer, which was placed in the axilla, one morning marked 76°, which a few days later was even surpassed. The trickery was, however, at last found out. When the patient thought she was not observed, she was seen approaching her left hand to the lower extremity of the thermometer which was placed in the right axilla, and finally the mystery was discovered. The interne, who was on the watch, demonstrated that by gently and repeatedly striking the lower extremity of the thermometer, the mercury could be made to rise to any height in the instrument. Dr. Du Castel, who communicated this case to the Medical Society, said he merely wished to observe of how little use it was to take the temperature in hysterical patients unless they were closely watched.

Dr. Hanriot Agrégé has been appointed Professor of Chemistry at the Paris Faculty of Medicine, in the room of Professor Wurtz, lately deceased.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from June 29 to July 5, 1884.

GIRARD, J. B., Captain and Assistant Surgeon. Ordered to relieve Surgeon W. E. Waters from duty as Post Surgeon, Plattsburg Barracks, Plattsburg, N. Y. Surgeon Waters, upon being relieved, directed to return to his proper station (Madison Barracks, N. Y.). S. O. 131, par. 3, Headquarters Department of the East, June 30, 1884.

HARTSUFF, ALBERT, Major and Surgeon (Fort Riley, Kan.). Granted leave of absence for one month, with permission to apply for one month's extension. To take effect when his service can be spared. S. O. 130, par. 6, Headquarters Department of Missouri, June 25, 1884.

MIDDLETON, J. V. D., Major and Surgeon. Ordered to relieve Surgeon B. E. Fryer from duty as Post Surgeon, Fort Leavenworth, Kan., on or before July 1st. S. O. 133, par. 5, Headquarters Department of Missouri, June 28, 1884.

BENHAM, R. B., First Lieutenant and Assistant Surgeon. From Department of Dakota to Department of Texas. S. O. 150, par. 8, A. G. O., June 28, 1884.

GORGAS, WILLIAM C., First Lieutenant and Assistant Surgeon. From Department of Texas to Department of Dakota. S. O. 150, par. 8, A. G. O., June 28, 1884.

WALES, PHILIP G., First Lieutenant and Assistant Surgeon. From Old Fort Colville, Washington Territory to Fort Cœur d'Alene, Idaho. S. O. 89, par. 3, Headquarters Department of Columbia, June 23, 1884.

Official List of Changes in the Medical Corps of the U. S. Navy, during the week ending July 5, 1884.

WELLS, H. M., Surgeon. Detached from Naval Hospital, Brooklyn, ordered to U. S. S. Lancaster.

SAYRE, J. S., appointed Assistant Surgeon. Commission dated June 27, 1884.

CORDEIRO, F. J. B., appointed Assistant Surgeon. Commission dated June 27, 1884.

PREVENTION OF CHOLERA.

[1884. Department No. 98. Marine Hospital Service.]

TREASURY DEPARTMENT,
OFFICE OF THE SECRETARY,
WASHINGTON, D. C., July 2, 1884.

To Collectors of Customs:

It has been brought to the attention of the Department that persons from the infected districts of France are leaving in considerable numbers by other than French lines. You will, therefore, require evidence that none of the baggage of immigrants or returning travellers has been shipped from the infected districts since June 20, 1884. A certificate of the local quarantine officer to the effect that no danger to the public health need be apprehended from allowing the landing of any passenger's baggage, may be accepted as entitling such traveller or immigrant to land his effects.

CHAS. J. FOLGER,
Secretary.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending July 5, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
June 28, 1884	5	16	56	6	186	35	0	0
July 5, 1884	3	6	27	3	156	41	0	0
Deaths.								
June 28, 1884	2	5	17	5	29	15	0	0
July 5, 1884	0	2	12	3	30	20	0	0

THE SIGNIFICANCE OF SCARS AND COPPER-COLORED SPOTS ON THE FOREHEAD.—T. Pershing, of Wilmington, Del., criticises a statement made by Dr. A. L. Ranney in the first of his articles on "Methods of Examination in the Diagnosis of Nervous Diseases," published in THE RECORD. It is there affirmed that ulcerations upon the forehead not traumatic are syphilitic; scars and copper-colored spots are equally significant. Dr. Pershing says that "herpes zoster occurring on the forehead may be severe enough to cause ulcerations."

THE TREATMENT OF ASPHYXIA.—A lecture was recently delivered by Dr. Benjamin Howard, in the course of Professor Charcot, at the Salpêtrière, upon the mechanism and treatment of asphyxia. The plan usually followed, of making traction upon the tongue, is, the lecturer stated, useless, for the anatomical conditions will not admit of elevation of the epiglottis by this means. The only way by which this elevation can be accomplished is to place the head and neck in a position of forced extension. When this is done, the tongue is separated from the pharynx and a wide and free passage without any obstruction is established leading directly from the posterior nares to the lungs. The lecture was supplemented by demonstrations upon the cadaver in which the facts were proven to be as stated.

DERMATOLOGY AT VIENNA.—A correspondent of the *Northwestern Lancet* writes: "One very noticeable feature is the almost exclusively local treatment of all skin diseases, except those due to syphilis, and the scrofulous or tuberculous diathesis. Though Kaposi mentions iron and arsenic in his book, I never saw it given or mentioned in the hospital. Scrofulous and chlorotic patients were given cod-liver oil, which was almost the only internal medication which I observed. He says the internal treatment of skin diseases was proven useless years ago in this hospital. He is accustomed also to occasionally express himself very strongly upon the doctrine that tubercle, lupus, and syphilis are related diseases. He, as well as Neumann, repudiates this idea in toto. On every reference to the subject he says: 'Gentlemen, lupus is lupus, tubercle is tubercle, and syphilis is syphilis. Any shading of the one into the other does not exist. Syphilitic lupus is nonsense.' Lately he read that Koch claims to have discovered the tubercle bacillus in lupus nodules. He said on coming to the class: 'Gentlemen, if this be so, all I have to say is that it is bad for the bacillus, for it would be proof positive that he is not the cause of specific tuberculosis.' The favorite treatment of lupus is removal of the nodules with the caustic potash stick or a curette, and application of mercurial plaster. During the winter he used the treatment of the sublimate solution. It bleached the ugly-looking surfaces, removing the coloring matter from the scars very nicely, but caused so much eczema, and the apparent benefit was so transient that it was soon thrown aside. Psoriasis, when not covering too great an area of skin, is treated by removing the scales with a curette, or, after maceration with soft soap, removal in the bath with a scrubbing brush; after which the affected parts of the skin are painted with chrysarobin salve—chrysarobin 5 or 10 to vaseline 40—twice a day for several days. Every one of the large number of cases which I observed improved rapidly. Owing to the discoloration of the skin caused by chrysarobin, the face, head, and hands are never treated with this remedy. On these parts tar is still the favorite. A pyrogallic acid salve of the same strength is sometimes used, spread upon linen, and after removing the scales as before. It does not cure so rapidly as the chrysarobin, but in skins which would be too severely inflamed by the latter drug it proves very useful."

THE TREATMENT OF TAPE-WORM — TAPE-WORMS AND PREGNANCY.—Dr. Frank H. Rowe, of Cumminsville, O., referring to a request for opinions regarding the treatment of tape-worm, sends the following. The ingredients must be reliable and the compounding carefully done: "℞. Pulv. cort. radix granat., ℥ ss.; pulv. secale cornut., ʒ ss.; pulv. gum acacia, ʒ ij.; ol. felicis, ʒ j., ol. crotonis, one drop, mixed well; mix well in rotation, pulv. peponis, ℥ j. M. Ft. emulsio with aq. dest., ℥ vij., add sodæ salicylate, grs. xv. S. Take the above emulsion at once in the morning. One hour before taking it, take a small cup of good coffee alone; the emulsion should be taken while lying down, a sinapism of pure mustard having been previously applied over the epigastrium. *After* the free use of saline cathartics, sol. magnes. cit., ℥ xij., magnes. sulph., ℥ j. M. S. at once —to be taken the *previous* day. And the evening before taking the emulsion, the supper should consist of a very liberal repast, consisting exclusively of onions and herring (or mackerel) salad. While referring to the subject of tape-worm, I would notice a recent article in the *London Record* in relation to the reflex disturbances produced by tænia, ascribing a series of miscarriages in one or two individuals to their presence, pregnancy going on to full time after the removal of the worm. Such has not been my experience in a recent case of a similar character. A patient having had at least four miscarriages between the fifth and seventh month, accidentally discovered evidences of the presence of a tape-worm. I successfully treated her for it in the meantime. She became pregnant, and flattered herself that the cause of her miscarriages was removed, and that she would go on to full time. Such, however, was not the case, as at the usual time she miscarried. Habit possibly had some influence in determining this. The reflex disturbances produced by tænia seem to be over-estimated. And, judging from the physical condition of cases seen, one must conclude that their effect upon the health of the individual containing them must oftentimes be almost *nil*."

ANTIPYRIN is the name of a chinolin-derivative, first used by Filehne and recently experimented with by P. Guttmann. In doses of two grammes it reduces the temperature powerfully, this reduction lasting five to six hours. It has no bad after-effects, and only very rarely disturbs the stomach.

A NOVEL METHOD OF CULTIVATING BACILLI.—Prof. Baumgarten takes a bit of tuberculous tissue and introduces it with antiseptic precautions into the anterior chamber of a rabbit's eye. After six or eight days he removes a small portion of the tuberculous nodule and introduces it into a second rabbit's eye, and in six to eight days repeats the process with a third rabbit. He thus gets a mass of tubercle bacilli almost entirely free from extraneous tissue. He recommends this method as the most convenient and certain way of securing pure cultivations.

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Original Articles.

SOME REMARKS ON AFFECTIONS OF THE HEART.

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III.

STRUCTURAL CHANGES.

PROBABLY there is no disease to which humanity is liable more dreaded than fatty degeneration of the heart. All students are liable to have this weird malady, wrapt in mystery, when first studying disease of the heart; it is the *bête noir* of many persons who curiously dip into medical literature, especially if their thoughts are directed by their family history to cardiac maladies; perhaps medical men themselves fear it more than any occult malady with the exception of aneurism. Why is all this? Because it is a general belief that fatty degeneration of the heart is a disease which is shrouded from our ken; it stalks in darkness, unseen, beyond detection. Mystery gives it its terrors; it belongs to the unknown! Nothing of the kind! It is a malady which reveals itself, albeit not one which forces itself upon the attention like valvular disease, or a paralyzed limb. Fatty degeneration of the heart has its known history, its pathological relations, like other diseases. That it is the cause of sudden death may at once be laid down as an axiom. So long as its structure is unimpaired, its muscular fibrillæ sound, the heart will struggle on, often though the cause of death, yet itself the last to die.

Fatty decay of the heart-wall may go on masked by other troubles, and, consequently, not be recognized, as occurred in a patient of mine at the hospital while writing these papers. She was a woman in the fifties, with some œdema in her legs, and a mitral lesion; not, apparently, a very serious case. She stood a full dose of compound jalap powder without any suspicious indications, and seemed to be improving, when suddenly she died without a struggle. When the post-mortem came the explanation was not far to seek. She had a nutmeg liver, granular kidneys, and the texture of the heart-wall was considerably impaired. She had been, in all probability, a drunkard. But of this it is impossible to be certain. A faint arcus senilis and a cloudy cornea was the only outward visible sign of the inward pathological changes. Here fatty degeneration might have been suspected, but it was certainly not palpable. There was no clot in the heart: death had come about by fatal syncope. And it is this last to which fatty degeneration renders its victim liable; no matter whether the appearance of general health is maintained, or, as in the case just given, there is also other palpable disease present.

At other times an elderly man dies suddenly after an effort, as rushing to catch a train; or after emotion, like the great anatomist John Hunter; or at some gathering; or on the night-stool, as died a well-known temperance lecturer under my own care not long ago. In the last case a hale, well-nourished, florid, elderly man, who had quite recently been lecturing with his wonted vigor, was seized with an attack of severe dyspnœa, which left him shaken, but not otherwise the worse of it. His medical attendant called me in in consultation, and the circumstances roused my suspicions that the right ventricle was not to be trusted. Strict orders were given about quiet being maintained, all effort avoided, especially straining at stool (which brought on the attack), and no lectures to be announced for some time. All went well for a time, and he began to think the doctors took too grave a view of his case. So he went down to the city to see to some business, came home, after that went into the water-closet, and died there. There is no moral doubt that there was fatty decay of the right ventricle present in that case.

What are the indications of a fatty decay in the heart-walls? The heart has a dead-leaf here instead of the normal dark flesh color, *i.e.*, when the condition is pronounced; it is friable, readily torn, and if a piece be pressed between blotting-paper the stain of grease is found. Under the microscope, first, the transverse striæ are clouded and then lost; second, granules of fat are to be seen near the germinal matter, afterward spreading throughout the fibril; third, the fibril has given way to a string of oil globules within the sarcolemma. The disease may be general; it may be connected with the area supplied by one coronary artery; or it may belong only to the area fed by one branch of one of the coronary arteries, where that branch is occluded by some growth in the wall of the vessel.

What is the cause of decay in the fibrillæ of the heart-wall? An insufficient supply of blood. How is that brought about? By an atheromatous condition of the tunica intima of the nutrient artery usually. Degenerative change in the coronary vessels is the cause, *par excellence*, of fatty necrosis of the muscular fibrillæ of the heart. There may be an atheromatous tubercle blocking the orifice of a coronary artery, as was found in an elderly gentleman who died in the sexual act with a venal Venus, in one of our London parks, some time ago. Or it may be that an adherent pericardium along the coronary vessels cuts down the blood-supply until the heart-fibre is no longer properly nourished, as was said to be the case with the late renowned Sir James Young Simpson. But, speaking broadly, when fatty degeneration of the heart-wall is found, the coronary arteries are the seat of atheromatous change. Atheroma is the development of connective corpuscles in or under the tunica intima of the arterial wall. It may be in patches or it may be diffused. Usually there is the hard artery, liable to be also tortuous. The change can often be seen in the temporal arteries, which to the eye elongate on each pulse-beat. The artery loses its elasticity while its lumen is diminished.

The general associations of the fatty heart are these: First, the "gouty heart," or chronic Bright's disease, a large left ventricle, a tight artery, and an accentuated second sound at the aortic root. The physiological evidence of high arterial tension is a large bulk of urine. But after a time the bulk of urine drops; and as Sir William Jenner has pointed out, this is a clinical fact of the grimmest significance. Why is the bulk of urine falling? Because the hypertrophied heart-wall is being undermined by a decay in the muscular fibrillæ. There are other evidences of a waning energy in the left ventricle, and the case either ends suddenly, or presents the well-known features of heart-failure. Sometimes there is little hypertrophy, and these are, apparently, the cases where death takes place suddenly, on or *after* some effort, as a rule. Old people are intensely reticent when they have done something foolish, and if all the circumstances could be known, my

own individual opinion is that a history of some effort would be found to precede the fatal syncope in almost all cases where the heart ceases suddenly in diastole in persons apparently well. In some cases the fatal event occurs in a person apparently in fair health, as in the case given of the temperance lecturer. At other times evidences have been furnished of failure of the heart unmistakably pointing to the morbid change. At other times men are seen with a tranquil gait, very careful of themselves, apt to have attacks of vertigo, are seen at times to clutch at some object to help them to keep up, who are said to be the subjects of fatty degeneration of the heart—and doubtless in some cases this is correct. At other times such is not the case. I remember when in general practice being called in to see an old gentleman, who from his evidences of failing strength, plus the feebleness of his heart-sounds and the condition of his arteries, was to all appearance the subject of a fatty heart. Yet by rest and tonics in time he improved greatly, and as the heart regained its tone an aortic systolic murmur could be heard while there were evidences of hypertrophy of the left ventricle. When I left the neighborhood he was a hale, fairly active old man, and died of something unconnected with his heart. It is quite clear that this case was not one of fatty degeneration of the heart, but rather one of temporary malnutrition.

How is it that very often the morbid condition of atheromatous change is more pronounced in the coronary arteries than in any other part or portion of the arterial system? Such is undoubtedly the fact, and the thickened, tortuous, white coronary arteries stand out prominently by contrast with the blue veins when the heart is laid bare. They are thickened, and what is more, their calibre is diminished, and with that the blood-current which flows through them. The heart-muscle is underfed, and then, in time, fatty degeneration of the fibrillæ follows. Why is the coronary circulation so much more than any other part of the arterial system the seat of this morbid process? To my mind, the answer is, that this is due to the fact that the coronary arteries spring from the aortic root and so are filled by the full force of the aortic recoil. Other arteries of *like* size have the shock broken by intervening moderate sized vessels, or are not so forcibly dilated by the aortic recoil. The full force of the aortic recoil falls upon the aortic valves, and the blood-current eddies furiously in the sinuses of Valsalva, acutely distending the coronary arteries. Especially is this the case with the hypertrophied ventricle and high arterial tension of the gouty heart. Atheroma is the result of over-distention (*ueberspannung*) plus some tissue-tendencies of the gouty diathesis, or the syphilitic cachexia. Consequently, while the aorta and the rest of the arterial system are but in an early stage of the atheromatous change, and still possess considerable elasticity, the coronary arteries are in an advanced condition, are tortuous, inelastic, with their calibre gravely diminished by thickening of the tunica intima encroaching on the bore of the blood-vessel. The lessened blood-current is broken in its course by the curves of the artery and an insufficient blood-supply to the heart-muscle leads to its decay. Such is, to my mind, the sequence of the events.

Consequently fatty degeneration is the sequel to the gouty heart. Such at least are its clinical phenomena as presented to me in my experience. Of course a man must be guided by what he himself has seen and encountered; he cannot be so familiar with the experience of others, but what I read of their observations tallies with my own. As an apple waxes, ripens, and ultimately rots, so the gouty heart passes through these varying phases of muscular growth, high arterial tension, hardening arteries, and diminution of calibre by the atheromatous change, the blood-supply to the cardiac muscle being cut down until the muscle is unequal to its work, and stops in diastole. Having run the risks of the heart bursting the arteries, the big heart gradually rots and stops. Having passed the rocks of the earlier risks the patient drifts on to the deadlier shallow beyond. The history of many families, certainly my own on all sides, is arterial rupture (which in no case has been fatal, and that only in advanced life), followed in time by sudden cessation of the heart in diastole from softening of its fibres; and this last morbid change has always given distinct evidence of its approach and not come like a thief in the night.

Such, then, is my view of the natural history of the fatty heart: it is the last development of a long pathological process, the longest and most striking with which we are yet familiar

Of course it is not asserted that fatty degeneration of the heart never has any other antecedents; but this is its history as ordinarily encountered in practice. Occlusion of the coronary arteries, or rather partial occlusion, is the cause of the decay of the heart-wall. In one case death may take place suddenly, unexpectedly. In another, and far more commonly, when the wall is weakened dilatation commences, or rather recommences, and as hypertrophy's arresting hand is lifted so the symptoms of a failing heart are developed, and all the skill and pains in the world can never strengthen that failing heart, or even do much to stave off the inevitable end. When a patient with an hypertrophied heart and hard arteries begins to find the bulk of urine falling, and then heart symptoms showing themselves, with or without any coexistent valvular disease, the transient eye can read the beginning of the end. And this end is far, far more common than sudden death in the midst of apparent health, where the heart has undergone little or no preceding enlargement.

Fatty degeneration of the heart is common with ill-fed drunkards. But it has nothing to do with obesity, and is as comnon in lean persons as with stout persons. It has no relation to the growth of adipose tissue. It is a decay of the muscular fibrillæ, which undergo in life the same molecular changes as are found in the production of adipocere after death. Fat takes the place of muscular tissue within the scarcolemma, and the heart stops contracting because it is the seat of mural decay, in other words is "rotten."

A species of acute fatty degeneration of the heart goes on whenever a high temperature is maintained for some time, as in the specific fevers. Indeed, in relapsing fever, where the temperature runs very high, the heart becomes so weakened that death from syncope is not rare in the stage of convalescence.

The rebuilding of the cardiac fibrillæ after a sharp pyrexia is sometimes very slow, and months may elapse before the patient is equal to much exertion. The most pronounced cases, in my experience, of cardiac adynamia due to acute fatty degeneration have been those of young adults who have had typhoid fever, several of them medical men.

Then there is fatty infiltration, a growth of true adipose tissue outside the heart and to some extent within its structure. Here fat is deposited betwixt the fibrillæ, which are pressed upon by these fat-cells. A certain amount of adynamia in the heart is the result. Such fatty growth is usually found in obese persons of lax fibre. It is by comparison with fatty degeneration a somewhat uninteresting pathological condition.

Then there is a condition of adynamia in the heart, and also in the diaphragm, which, in its features, simulates fatty degeneration in conditions where the assimilation of albuminoids is impaired. It is commonly seen where the liver is disturbed, and instead of elaborating the proteids brought to it by the portal vein (or perhaps peptones not converted once more into proteids) into the serum-albumin of the liquor sanguinis, the liver turns them into lithates and bile acids, in consequence of which the heart and diaphragm are ill-nourished. Being ill-nourished they are deprived of much of their energy, with the result that the pulse is feeble, the heart-sounds weak,

there is cerebral anæmia, there is breathlessness in effort (partly from feebleness in the diaphragm), and the general condition which is associated with fatty degeneration is closely simulated. Indeed it is the "double" of fatty degeneration. To this state I have given the name of "Heart Starvation," for which a critic in the London *Medical Record* accused me of "the attempt to dress up well-known clinical facts in strange and startling phraseology;" continuing: "Apart from the language in which they are disguised, there is not a fact mentioned in this essay which is not also a commonplace to every experienced practitioner" (August, 1881). Despite this harebrained frivol of self-satisfied ignorance, many men of sound judgment regard the essay as a useful contribution to medicine on a subject on which little is known. If this occurs in a comparatively young person it would hardly be likely to be mistaken for a truly senile change. But when it occurs in a person who is of that age when senile changes may be looked for, it is not always possible to distinguish betwixt it and fatty degeneration of the heart, as in the case given above as occurring in my early days. It is really this condition of malnutrition grafted upon an old-standing valvular lesion which brings the patient to the doctor very often. Fortunately it is a remediable condition, which fatty degeneration (as described above) certainly is not.

The condition of the heart-muscle is a matter on which more general information is desirable. It is not flattering to our profession to hear patients say that years before they had been told they had fatty degeneration of the heart and must soon die suddenly, and yet then were well. The condition which had been diagnosed as "fatty degeneration" was really that of its double, "heart starvation."

A CONTRIBUTION TO THE STUDY OF CORYZA VASOMOTORIA PERIODICA, OR SO-CALLED "HAY FEVER."[1]

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"Nunquam ita quisquam bene subducta ratione ad vitam fuit,
Quin res, ætas, usus semper aliquid opportet novi,
Aliquid moneat, ut illa quæ te scire credas, nescias,
Et, quæ tibi putaris prima, in experiundo ut repudies."
—TERENCE, in "Adelphis," Act V.

WHEN the phenomena of a given disease or unnatural condition are inexplicable by known pathological laws, or do not come within the range of that speculation which empirical fact and scientific experiment allow, it is customary to seek in the term "idiosyncrasy" a convenient refuge for acknowledged ignorance. This applies with especial force to the affection in question, the peculiar features of whose clinical history have been submitted to this lazy explanation. The well-recognized, but imperfectly understood personal susceptibility to certain forms of local irritation, which is the sad prerogative of the sufferers from this disease, has always been the stumbling-block in its investigation and the rock upon which the various speculations as to its nature have been wrecked.

Hasty generalizations based on the study of conditions external to the organism, to the exclusion of pathological agencies within, together with deductions drawn from isolated cases, and the uncertain testimony of the laity, have given rise to a variety of names indicative of its supposed etiology, such as "hay fever" or "asthma," "pollen fever" or "poisoning," "rose" or "peach cold," etc., appellations which should be discarded and forgotten, as they not only tend to perpetuate erroneous views and to introduce elements of confusion into the investigation, but also, by a diversion of the mind from mere essential conditions, have in no small measure contributed to retard progress in the therapeutic management of the disease.

While the term *coryza vasomotoria periodica*, suggested in the title of this communication, does not meet all the requirements of a logical definition, it may nevertheless be used provisionally until more exact knowledge of the affection furnishes data for the construction of a better. For, as will be shown below, the disease is essentially a coryza, showing, in most cases, a decided tendency to periodic recurrence, and dependent upon some functional derangement of the nerve-centres as its predisposing cause.

Until within the past few years clinical and experimental inquiry has been directed to the investigation of the most prominent exciting external influences provocative of the attack, and other and more important agencies have been entirely overlooked, or set aside as the general or special expressions of an idiosyncrasy, an explanation which is practically meaningless and conveys no definite or intelligent idea concerning the essential nature of the disease. While it is undoubtedly true that the inhalation of certain forms of matter, and pollen is only one of them, exercises an unquestionable irritative influence in the production of the paroxysm, it is, at the same time, equally certain that in a large proportion, if not all, careful inquiry will discover this influence to be purely secondary or accidental—to be dependent upon some local or constitutional condition. Although a number of investigators had previously labored with praiseworthy zeal to establish a definite pathology of the disease, the first to open the way to the rational solution of the problem was the late Dr. George M. Beard, of New York, who, by carefully selected statistics, pointed out the importance of the neurotic element as a factor in its production.[1] According to Beard, hay fever is a neurosis, a functional disease of the nervous system, an affection of modern life and of the nineteenth century. While he does not explain exactly in what such a neurosis consists, while his researches are open to fair criticism, and while his conclusions cannot be unreservedly accepted, they served, at least, the important purpose of lifting medical thought from the grooves to which it had been confined by the supporters of the pollen and bacteria speculations, and diverting it into newer and more fruitful channels.

Beard, and those who preceded him, not only deprecated the possible etiological importance of catarrhal affections of the upper air-passages, but went so far as to say that the very opposite state of affairs existed, and that the subjects of "hay fever," so called, were exempt from nasal and other forms of catarrh. The first, perhaps, to correct this erroneous impression and to point out the important rôle which disease of the naso-pharyngeal, cavities plays in the production of hay fever was Dr. Daley of Pittsburg, who, in 1881,[2] showed that, in a proportion at least of cases, there is local disease of the nose or naso-pharynx, without which the exciting cause is innocuous; and futhermore proved by clinical evidence that the cure of the affection may be effected through the removal of the local intrinsic condition.

The following year, Dr. Roe, of Rochester, published the favorable results of his treatment of the disease by operative procedures directed to the hypertrophied membrane in the nasal chambers.[3] According to Roe, hay fever is caused by the contact of the pollen of grasses or flowers and other irritating particles in the atmosphere with the nasal mucous membrane, which in certain individuals is rendered peculiarly susceptibie by virtue of disease, either active or latent, of the naso-pharynx, associated with hypertrophic catarrh of the nasal passages.

In the course of some experiments made by me on the healthy and diseased mucous membrane, with refer-

[1] A lecture delivered at the Baltimore Eye, Ear, and Throat Hospital, June 14, 1884.

[1] Hay Fever, etc., N. Y., 1876.

[2] *Vide* Archives of Laryngology, April 1, 1882. Dr. Edson had previously (letter to New York MEDICAL RECORD, 1878, vol. ii., p. 317) called attention to the fact that all cases of the disease presented one or more of certain symptoms referable to the nose, as great sensitiveness of the nasal membrane, coryza, persistent sternutation, naso-pharyngeal catarrh, etc.

[3] N. Y. Medical Journal, May 12, 19, 1883.

ence to nasal cough and the determination of an area in the nostril for the production of the various reflex phenomena associated with nasal disease,[1] the following facts were ascertained, whose application to the disease in question will, I venture to think, throw some additional light upon its pathology: 1. That in the nose there exists a well-defined sensitive area, whose stimulation through a local pathological process, or through *ab extra* irritation, is capable of producing an excitation which finds its expression in a reflex act or in a series of reflected phenomena. 2. That this sensitive area corresponds, in all probability, with that portion of the nasal mucous membrane covering the turbinated corpora cavernosa. 3. That nasal cough is produced only by stimulation of this area, and is only exceptionally evoked upon irritation of other portions of the mucous membrane. 4. That all parts of this area are not equally capable of generating the reflex, the most sensitive spots being probably represented by that portion of the membrane covering the posterior end of the inferior turbinated body and the septum immediately opposite. 5. That the tendency to evolution of reflex phenomena varies in different individuals, and is probably dependent upon the varying degree of excitability of the erectile tissue. In some the slightest touch is sufficient to excite the reflex act, while in others chronic hyperæmia or hypertrophy of the cavernous bodies seems to evoke it by constant irritation of the reflex centres, as occurs in similar conditions of other erectile organs, as, for example, the clitoris.

Apart from experimental proof of such localization—viz., to the posterior and inferior portion of the nostril—I showed, from my clinical observation, (1) that in cases where reflex cough is present, these are the portions chiefly, if not solely, involved; (2) that the act may be produced here at will by artificial stimulation of the diseased area, and (3) dissipated by local applications to, or removal of the same; (4) that foreign bodies only excite cough when they are imparted in the sensitive area; and (5) that polypi give rise to reflex phenomena only when they arise from or impinge upon the sensitive portions of the area; and lastly, a point of importance as bearing on the treatment, (6) that where *complete* atrophy of the turbinated structures exists, as, for example, in certain cases of ozœna, reflex cough is not present, nor can it be induced by artificial stimulation.

These facts are not alone true of cough and asthma; my experience furnishes me with a series of cases where they could be demonstrated as true of various other reflex phenomena originating in diseased conditions of this area, and I have already called attention to the reflexes[2] which I have met with (cough, pain in the ear and larynx, redness of drum membrane, etc.) in the course of operative procedures in this region.[3]

Since I first directed attention to the posterior end of the inferior turbinated body and septum as the most sensitive spots to reflex-producing impressions, I have received several communications confirmatory of the views expressed in my paper, which have also derived support from the publications of other writers. Thus, the observation that reflex asthma arises from nasal disease only when the posterior portions of the sensitive area are in some way involved, either directly from a pathological condition of the parts or from the irritation of a polypus,[4] has been confirmed by Dr. Roe,[5] who explains the more frequent occurrence of the paroxysms at night by the gravitation of blood to the sensitive area. The same author, moreover, in his recent paper on "hay fever,"[1] points out the fact that, in the majority of cases, the seat of irritation during the attack is the inferior turbinated bone and posterior portion of the septum, thus furnishing additional confirmatory clinical evidence in favor of localization of the reflex area in the lower and posterior portions of the nostril.[2] While these observations go to show that the most sensitive spots are represented by the area indicated above, it is but fair to state that a different opinion is entertained by a German confrère, well known from his labors in this special field. In August, 1883, there appeared in Germany an interesting brochure from the pen of Dr. Haek, of Freiburg,[3] in which this writer maintains, as the result of independent experiment, that the anterior extremity of the inferior turbinated bone is the point from which all reflexes take their origin, and that those arising from stimulation of other portions of the nostril only occur, secondarily, through congestion of the cavernous tissue of this circumscribed locality.

Like Daly and Roe, Haek holds that morbid conditions of the nasal membrane play the most important part in the etiology of the disease. He also believes that there are two factors in the production of the paroxysm, viz., a hyperæsthetic condition of the terminal filaments of the fifth and olfactory nerves, and an increased irritability of the cavernous tissue, caused, as a rule, by local nasal disease, and inclines to the belief (also held by Roe) that the neurasthenic symptoms are secondary to the nasal affection, calling attention, at the same time, to the fact that the latter may coexist with a general neurosis without having any connection with it.[4]

Finally, Dr. Harrison Allen advances the view[5] that "hay fever" depends solely upon obstruction of the nostrils (from deflection of the septum, hypertrophy of soft parts and bone, turgescence of nasal mucous membrane), and that the cure consists simply in removing the obstruction (or tendency thereto) in the nasal chambers. According to his experience, sufferers from hay fever and allied disorders have one feature in common—the inferior turbinated bones lie well above the floor of the nostril, an anatomical peculiarity which subjects their bulging mucous membrane to additional irritation from extraneous substances.[6]

It would appear, then, that the truth is irresistibly emerging into recognition that certain abnormal conditions of the nasal passages are necessary to the production of the *ensemble* of phenomena which form the classical picture of so-called hay asthma. Although the results arrived at by different observers, working independently of each other, and starting out in some instances from different standpoints, are not altogether harmonious, they present nevertheless a singular unanimity in their convergence to a common point—in their recognition of the importance of remedial measures addressed to the nasal chambers as a prime factor in the therapeutic management of the disease. While, then, it is probably true that certain states of the nasal passages are necessary to the production of a paroxysm, it is, at the same time, equally demonstrable that these are not always dependent upon well-defined local nasal disease, but that, in a number of cases, such conditions are originally brought about by abnormal excitability of the vasomotor centres from inherited or acquired disease. The problem, then, presents for consideration two important con-

[1] On Nasal Cough, and the Existence of a Sensitive Reflex Area in the Nose, American Journal of Medical Sciences, July, 1883. The results of these experiments were first brought before the Baltimore Medical Association in the early part of 1883, and subsequently before the Medico-Chirurgical Faculty of Maryland (April, 1883, *vide* Transactions), and the American Laryngological Association (May, 1883, *vide* Transactions).

[2] Trans. Med. Chir. Fac. of Maryland, 1884. American J. Med. Sc., loc. cit., Trans. Virginia State Society, 1883.

[3] There is one point pertinent to the subject of this paper which should not be lost sight of, and that is that certain reflex phenomena may be awakened by stimulation of the apparently normal membrane.

[4] *Vide* a paper by the author on Reflex Cough due to Nasal Polypi, etc. (read April 25, 1884). Trans. Med. Chir. Fac. of Maryland, and N. Y. MEDICAL RECORD, May 3, 1884.

[5] Journal of the American Medical Association, September 15, 1883.

[1] N. Y. Medical Journal, May 3 and 10, 1884.

[2] In a recent number of L'Union Médicale (January 22, 1884, La toux nasale) M. Longuet believes, with me, in the existence of a tussigenic area (*zone tussigène*) in the posterior end of the inferior turbinated bone and septum, which he compares to the hystero and epileptogeuic zones of Brown-Séquard.

[3] Ueber eine operative Radicalbehandlung bestimmter Formen von Migräne, Asthma, Heufieber, etc. Wiesbaden, 1884.

[4] See also, Wiener Med. Wochenschrift, No. 14, 1883.

[5] American Journal Med. Sciences, January, 1884.

[6] Allen reports several cases successfully treated by removing the obstruction to respiration. Cases have also been treated with the cautery by Dr. Sajous of Philadelphia (reported at last meeting of the American Laryngological Association), whose conclusions on the subject do not differ from those of Dr. Roe.

ditions; on the one hand the local nasal phenomena, and on the other the etiological relations of the central nervous system. In allotting to each its respective causative significance, care should be taken, in avoiding the Scylla of the neurologist, not to be too closely attracted to the Charybdis of another form of specialism.

Approaching the question from this standpoint, and guided by my personal experience, I believe that our definite knowledge of the etiology of the disease may be briefly expressed as follows:

1. The essential, distinguishing feature of the paroxysm of so-called "hay asthma" resides in an exalted condition (erethism) of the nasal erectile tissue, and especially that portion occupying the posterior end of the inferior turbinated bone and the septum immediately opposite. This latter area corresponds to the distribution of the spheno-palatine branches of the superior maxillary nerve, as distinguished from the nasal branch of the ophthalmic, which latter supplies the more anterior portions of the nasal fossæ. The former nerves, derived through the ganglion of Meckel, probably therefore contain the vaso-motor nerves which govern the erection of the turbinated tissue, and hence the localization of the sensitive area becomes the key to the mechanism of the paroxysm and brings us nearer the solution of the pathological process that sets it in motion.

So far as my observation goes, every attack is attended with more or less swelling of the erectile tissue, which is more pronounced in the lower and posterior parts of the nostril. This swelling, occasionally inconsiderable, is often sufficient to produce absolute and complete closure of the nasal fossæ. I have moreover, so far, never seen, nor have I been able to find the record of a single case where paroxysms of hay fever occurred where the tissue was completely atrophied or destroyed by disease. In two cases under my observation, the nasal chambers were markedly capacious, but, at the same time, the erectile tissue was well developed. Finally, the cure of the affection by the artificial destruction of the erectile bodies amounts to a demonstration.

2. This exaggerated irritability of the cavernous tissue may be directly due to the constant presence of congestion or other pathological conditions of that structure, the result of direct or indirect (reflex) irritation from *ab extra* influences, *plus* a hypersensitive condition of the vasomotor centres begotten of their prolonged excitation by the irritating influence in the nostril; or it may be brought about, in the first instance, by an exalted state of the central nervous system, leading eventually to disordered functional activity of the vasomotor nerve-centres; or, finally, a hypersensitive condition of the latter may be conditioned by other pathological states of the system as a whole, or as the result of reflected irritation from its individual parts.

I am inclined, therefore, to transfer the point of greatest excitability from the peripheral ends of the nerve filaments to the nerve-centres themselves. While I do not deny the possibility of a hyperæsthetic condition, or even organic changes in the terminal filaments of the sensitive nerves, as an occasional factor, and while fully aware of the want of experimental proof in favor of the view advanced, still it seems to me a more adequate, a more comprehensive explanation of the varied phases of the disease. Upon this theory can be best explained, moreover, the occurrence of paroxysms from irritation reflected from various parts of the body remote from the nasal passages. The weight of clinical evidence, too, is in favor of disordered functional activity of the nerve-centres, as against organic alteration of the peripheral sensitive nerves. Finally, it is probably not at the terminal ends of these filaments, but in the centres themselves, that the perception is awakened which differentiates one form of irritant from another; that the nerves themselves are but the passive channels through which the impression is transmitted, and that the production of a paroxysm by a given irritant will depend, other things being equal, upon the, so to speak, discriminating power or peculiar susceptibility of the centres themselves.

3. There is practically an infinitude of causes, external and internal, which may precipitate the nasal orgasm, such as various forms of matter suspended in the atmosphere (pollen, different forms of animal life, etc.), or the erection of the tissue may be conditioned by those influences that are commonly productive of erection of the nasal corpora cavernosa, such as varying meteorological relations, various forms of reflected irritation, or, finally, it may be occasioned through psychical causes. It follows, therefore, as a corollary to the above, that any one irritant is insufficient of itself to provoke the attack, the latter being only possible either from disordered functional activity of the nerve-centres, or local structural disease.

4. The power of a given local irritant to produce such impression, and the violence of the resulting attack, in all probability depends upon its physical properties and the length of its sojourn in the nasal cavities. Thus, the peculiar glutinous nature of some substances, as for example pollen, the irregular surfaces of others, as the golden-rod [1] and similar substances, will give rise to more prolonged irritation than substances of smooth contour, which are readily swept out of the nostrils.

5. Apart from its accidental occurrence with the flowering of certain plants, etc., the marked periodicity of the paroxysm in some cases, its regular appearance at a certain hour and on a certain day, so far from overthrowing its neurotic nature, points to some functional derangement as its possible cause. This tendency to periodical return of a given state is characteristic of certain morbid states of the nervous system, of which the so-called functional aphonia is a prominent example. It is not, therefore, stepping beyond the bounds of legitimate speculation to suggest this as the explanation of a certain number of cases.

6. Whatever be the original cause of such special tendency to erection and consequent evolution of reflex phenomena, the essential part of the mechanism of the paroxysm is the orgasm of the erectile area. This is the main-spring of the machinery by which it is set in motion, and without which the onset of the attack is impossible.

From what has been said above, it naturally follows that the rational treatment will consist (1) in diminishing the reflex excitability of the turbinated tissue; or, failing in that, (2) the partial, or, if necessary, complete destruction of the tissue itself.

The first indication must be met (1) by tonic remedies addressed to the nervous system, and by the exhibition of such drugs and methods as experience has shown control reflex excitability (the bromides, belladonna, chloral, counter-irritation to nape of the neck, etc.); (2) by the careful search for, and intelligent treatment of any pathological condition which may be regarded as a source of reflected irritation; and (3) by simple topical treatment of any existing nasal disease or irritation. In carrying out the second indication care should be taken to sacrifice as little of the erectile tissue as possible. It would accordingly be better to commence by removing or destroying that portion which covers the posterior end of the inferior turbinated bone, and, if necessary, that covering the septum immediately opposite; or, in other words, *that area which contains the greatest number of filaments of the sphenopalatine nerve.* Should this not accomplish the desired result, any additional sensitive spots should be located by means of the probe, as has been done by Roe, and appropriate treatment adopted.

The destructive agent used in any given case will vary according to circumstances. It may be said, in general,

[1] The golden-rod has also been regarded as the cause of hay fever. See editorial article on the Pathology of Hay Fever, by Dr. Frank Woodbury, in the Phila. Med. Times, December 1, 1883, p. 175

that hypertrophic enlargements of the turbinated bodies are best removed, if practicable, with the cold wire snare; swelling of the cavernous tissue over the septum is best treated with the galvano-cautery, while for complete destruction of erectile tissue, the latter agent or electrolysis is the best agent we possess.

Reference has been made several times above to reflected irritation of a distant organ as a factor in the production of the paroxysm. In order to illustrate this point, and at the same time make good the assertion of the fact, I will insert the following case:

Mrs. ——, aged thirty-seven years, married twenty years, the mother of one child, now eighteen years of age, came in the early part of April of this year to consult me on account of severe "hay fever." She has resided all her lifetime in a small manufacturing town on the banks of one of our Maryland rivers, and in proximity to a malarial district. Family history unimportant. Several of the neighbors suffer from paroxysms similar to her own. She is herself a woman of average intelligence, of spare habit, dark hair and eyes, good disposition, not inclined to be hysterical, nor easily frightened; is "dyspeptic," and suffers greatly from inability to digest her food. Without possessing a decidedly nervous temperament, in the common acceptation of the term, a more or less pronounced neurotic tendency expresses itself in a certain unnatural acuteness of the senses, and susceptibility to psychical impressions. Has never suffered from any nervous disease, with the exception of occasional neuralgic pains in the course of the fifth nerve, which have, however, of late, ceased to give her much trouble or concern. Has had malarial fever, and for the past four years has suffered from constant ovarian trouble. The left ovary is probably the only one involved, the condition being some chronic inflammatory disease. Has suffered for two years from "hay fever." Prior to her ovarian trouble, enjoyed excellent health and exhibited no tendency to catarrhal disease of the nose or throat.

The paroxysms are ushered in, as a rule, by chilly sensations, followed by violent and uncontrollable sneezing, intense redness of the conjunctivæ, increased lachrymation and spasm of the lids. During the attack she cannot see to read or write, any attempt to use the eyes being accompanied by great pain, photophobia, etc. The voice soon becomes husky and nasal, considerable mucus is expectorated from the throat, and a profuse watery and slightly mucous secretion is discharged in abundance from the nostrils. There is generally superadded to these symptoms a short barking cough, which often continues for several days after the subsidence of the attack. During the latter, the nostrils are always completely closed, so that nasal respiration is impossible. Pain is felt across the bridge of the nose and in the frontal and occipital regions, pain in the ears and tinnitus are nearly always experienced, and the meatuses feel as if stopped up by a foreign body. The amount of asthma accompanying the attack varies greatly, being at times more pronounced than at others. During the paroxysm pain is always felt in the left ovary, and any existing pain of that organ aggravated. The ovarian pain comes on after sneezing, and occasionally continues after the paroxysm has subsided. The attacks come on at all seasons of the year, and bear no definite relation to the conditon of the atmosphere as regards moisture or dryness; but are worse in spring and fall, *i.e.*, in the seasons of greatest temperature changes. They come on at all hours of the day, and she is often awakened from her sleep by the sudden accession of a paroxysm. The slightest exposure to draughts of any kind suffice to bring on the attack; the accidental unfastening of her night-dress at the neck during sleep, stepping from the bed to the floor, going about in her stocking feet, or changing her shoes for her slippers, and other equally trivial causes have frequently precipitated it. It is also brought on by physical or mental over-exertion, or by emotional excitement.[1] The attacks are not modified by diet, dust has little or no effect, while gas and smoke of various kinds produce a disagreeable, smothering sensation with some dyspnœa, but are insufficient to provoke the characteristic phenomena of the paroxysm. There are some plants that cause slight sneezing; but although frequently exposed to a pollen-laden atmosphere, exposure has never produced a paroxysm. The attacks invariably appear and are more severe at the menstrual period, appearing sometimes at its commencement, sometimes at its close. This latter condition of affairs has lasted for one year. They last generally for two days and one night, after which all the discomfort she suffers from them passes gradually away. She averages about two attacks a week, during which she is confined to her room, and often to bed. They sometimes leave her in a state of nervous prostration, from which she slowly recovers.

By the protection of the nasal passages from the contact of air during the attack, the paroxysms are somewhat mitigated in severity, except at the monthly period, when this has no effect. Residence at the sea-shore invariably gives relief; except during menstruation, when the attack is as severe as when at home.

During the intervals between the attacks, she does not suffer from nasal or throat trouble, beyond the accumulation of a slight amount of mucus in the nasal passages upon arising in the morning, with occasional dryness of the throat and huskiness of the voice. These phenomena are, moreover, of quite recent development.

Physical examination.—Nothing to indicate visceral disease, apart from the morbid condition of the ovary. No disease of auditory apparatus, larynx, trachea, or lungs. Anterior nasal passages apparently perfectly healthy. The posterior extremities of the inferior turbinated bodies, as seen in the rhinoscopic mirror, without being notably enlarged, present an ashy gray color often seen in hypertrophy of these bodies. The nasal fossæ are perfectly free and symmetrical. The lower border of the inferior turbinated bones cannot be seen in the mirror, and are not elevated above the nasal floor in front. There is no malformation or irregularity in the skeleton of the nose or other part of the face. The mucous membrane of the nasal pharynx is congested, and covered here and there with a faint film of transparent secretion. The mouths of the Eustachian tubes are normal in appearance. The lower pharynx is congested and studded here and there with small granules (commencing granular pharyngitis). No irregularity in the conformation of the pharyngeal cavities.

The treatment adopted in this case was in accordance with the indications laid down above, with special attention to the diminution of excitability of the erectile area. The nasal passages were kept thoroughly cleansed and protected against local irritation. Anodyne and alterative applications and acetic acid were made to the congested surfaces with the understanding that, should they fail to relieve, the galvano-cautery was to be resorted to.

At the end of one week little improvement was noticed; but at the close of the second marked change for the better had occurred, both as regards the number and severity of the paroxysms. At the expiration of six weeks the attacks had lost their distinguishing characters, the only annoyance from which the patient suffered being an occasional brief access of sneezing. At the two menstrual periods which intervened during this time, however, she had attacks resembling the original paroxysm, but greatly modified in severity. At the present writing, the sneezing has so markedly diminished, that it no longer gives her much concern, and her last monthly period was passed without the slightest nasal discomfort, although she was convinced that it was inevitable, and had pre-

[1] The patient attributes a great deal of her trouble to the excitement and mental anxiety which she underwent while in constant care of the wounded in her husband's factory, where accidents to the hands were constantly occurring.

pared herself for the attack. What the final result of this case will be I am, of course, unable to say, but from the present outlook, operative procedures will doubtless be unnecessary.

Remarks.—The above case shows, among other things, that the paroxysms of the disease commonly called "hay fever," may be brought on in the same individual by a variety of agencies differing entirely in origin, character, and mode of operation. At times they are produced by causes which are ordinarily provocative of common coryza, at others from the increased irritative stimulus given to a morbid process in a distant organ, or finally, they are occasioned by impressions of a purely psychical nature.

The attacks at the menstrual epoch are readily explicable by the physiological erection of the nasal corpora cavernosa which occurs at that period; for, as I have pointed out elsewhere,[1] in a certain proportion of women these bodies become enlarged and engorged during menstruation, the swelling of the membrane subsiding with the cessation of the catamenial flow. This turgescence may be bilateral, or confined to one side, may be inconsiderable and give rise to no inconvenience, or, on the other hand, the swollen bodies may include the nostrils and give rise to various reflex phenomena. In the "hay fever" sufferer, anything that tends to produce swelling of this tissue excites at the same time the tendency to the production of the reflex phenomena characteristic of the disease. In this particular case the chief, and, under certain circumstances, the sole excitant of the paroxysm was the utero-ovarian excitant of the menstrual epoch.

The history would point to a hypersensitive condition of the vasomotor nerve-centres, the result, perhaps, of constant irritation reflected from the diseased ovary, as the chief predisposing cause, or so-called "idiosyncratic" influence in this particular case. It is fair, too, to look upon the increased excitability of the erectile bodies, and the consequent repeated attacks of cough, as responsible for the amount of existing nasal disease.

The practical outcome of the above conception of the disease is simply this: Those who recognize in it the foundation of a rational therapeutic, and direct their treatment accordingly, will relieve all, and cure a large proportion of their patients; while those who blindly accept the traditional fallacies of the theory of external causes must continue to divert themselves with perpetual palliative experiment, and cling to the gloomy belief of the Englishman, that the only cure for the disease is patience, if removal from the British Isles is impossible, thanking God, at the same time, that there are only thirty days in June![2]

Apocynum Cannabinum.—Canada or American Indian hemp bark has a very persistent bitter taste, contains tannin and gallic acid. Is sometimes emetic, and causes diaphoresis; also cathartic, like jalap. It promotes expectoration, also drowsiness, increases the urinary secretion and diminishes the force and fervency of the pulse, like aconite or digitalis. It is most used in dropsy, and as a tonic and alterative in dyspepsia. Dose of powdered root, five grains, as an anti-periodic, twenty grains as an emetic. Decoction of ℥ j. to Ojss. of water, and boiled down to a pint; a wineglassful three times a day, as a diuretic, or ʒ j. of the bark of the root in ℥ viij. of water, ℥ ss. every six or eight hours. This is one of those remedies which should always be thought of in obstinate cases of cardiac or hepatic dropsy. Its diuretic action is frequently prompt and even extraordinary. It is the basis of Hunt's remedy for renal diseases. Although apocynum is used by some as gin and bitters, yet it is very disagreeable to others, and some persons far advanced in dropsy will almost rather die than swallow the simple infusion. A large addition of chimaphila or wintergreen will aid its diuretic powers and improve its taste.

[1] Irritation of the Sexual Apparatus as an Etiological Factor in the Production of Nasal Disease. American Journal Med. Sciences, April, 1884.

[2] *Vide* letter to British Med. Journal, 1883, p. 1315.

WARBURG'S TINCTURE.

Hints for Simplifying and Cheapening It.

By JOHN C. PETERS, M.D.,

NEW YORK.

Some time ago I was so impressed with the shrewd hints of The Record about Warburg's tincture that I have made a careful study of that complex preparation, which I hope will be instructive to its readers.

In the tincture 42 ounces of various ingredients are to be dissolved in 500 parts of proof spirit, which is about half alcohol and half water, by placing them in a water-bath for twelve hours, then expressing them and adding 10 ounces of disulphate of quinine, the whole mixture being replaced in the water-bath until all the quinine is dissolved.

The process seems simple, but it may safely be assumed that a great residuum of resinous, bitter, and aromatic substances will be left behind.

Next to quinine the most important ingredient is aloes, of which 1 lb. British, or 16 ounces avordupois, or 7,000 grains are to be dissolved in the 500 ounces of proof spirit. There are next 4 ounces, or 1,750 grains of rhubarb. Third, 4 ounces, or 1,750 grains of angelica seeds, which is a simple aromatic tonic, spice, or stimulant, like aniseed, calamus, and the like. Fourth, 4 ounces, or 1,750 grains of the so-called *confectio damocratis*, which is a mild confection of opium, which once contained sixty-two ingredients, with about 5 grains to the ounce of opium. Nearly a century ago the London physicians substituted the *confectio Londonense*, made of opium, 6 drachms; long pepper, 1 ounce; ginger, 2 ounces; caraway seeds, 3 ounces; syrup, 1 pint. There is 1 grain of opium in every 36 grains, and the dose is 10 to 30 grains. Hooper says: "To the credit of modern pharmacy this is almost the only confection of opium that now remains of all those complicated and confused preparations called Damocratis, Mithridate, Theraic, etc. It more nearly approximates the virtues of all of them than any other, and may be considered an effectual substitute for them in practice. It is a very warm and stimulating confection and admirably calculated to soothe pain and restlessness, and sustain strength in low fevers." Fifth, 2 ounces, or 875 grains of *elecampane*, or less than 2 grains to the ounce: all its virtue a redue to a slightly peculiar camphor, which gives it its odor. Sixth, 2 ounces of saffron. Seventh, 2 ounces of fennel seeds. Eighth, 1 ounce, or less than 1 grain to the ounce, of gentian. Ninth, 1 ounce of zedoary, which is almost identical with ginger. Tenth, 1 ounce of cubebs. Eleventh, 1 ounce of myrrh. Twelfth, 1 ounce of camphor. Thirteenth, 1 ounce of boletus laricis, which is a purgative comparable to jalap and senna.

To sum up, in each ounce of Warburg's tincture we have about ten grains of quinine; fourteen of aloes; four of rhubarb; one of opium; two of elecampane; two of saffron; one of gentian; one of ginger; two of fennel seeds; one of cubebs; one of myrrh; one of camphor; and one of boletus or jalap or senna.

In building up his tincture Warburg probably took a hint from the German and French so-called Paracelsian elixir of life, which is composed of aloes, nine parts; gentian, rhubarb, zedoary, saffron, and boletus laricis, or larch, or purging agaric, each one part; digested in proof spirit two hundred parts, and of which the tonic and alterative dose is one or two drachms.

The European tincture of rhubarb is made with cardamom and coriander seeds, and saffron. The angelica seeds, fennel seeds, elecampane, saffron, zedoary, cubebs, and the little myrrh and camphor are pleasant aromatic additions to the tincture; and the one grain of gentian, and one grain of boletus or jalap do not deserve a great deal of attention.

The question arises whether a few aloes and rhubarb pills with quinine and spices will not accomplish almost all that Warburg's tincture will.

Or if a liquid preparation is preferred any physician can build a formula for himself with simple tincture of aloes and liquorice, U. S. P.; tincture of rhubarb and cardamoms, U. S. P.; or tinct. rhei et sennæ, U. S. P., made with rhubarb, senna, coriander and fennel seeds aided by a little paregoric and compound tincture of gentian—the latter made with gentian, bitter orange peel and coriander seeds—which will complete the whole, unless one prefers to add a few drops of tincture of myrrh and fluid extract of cubebs.

DELIRIUM CLOSELY RESEMBLING MANIA À POTU, FOLLOWING THE FREE USE OF MORPHINE.

By S. W. DANA, M.D.,

NEW YORK.

The patient, a youth of seventeen, of good constitution and temperate habits, during an attack of acute peritonitis lasting seven days took morphine from two to nearly six grains daily—about twenty-eight grains in all. During the first four days his mind remained clear and active, though the morphine given was sufficient to reduce his respirations to twelve per minute. There were brief periods of sleep, not amounting to more than three or four hours in twenty-four. During the last three days there was much less sleep and occasional light delirium. After the morphine was discontinued the delirium gradually assumed most of the characteristic features of *delirium tremens* and continued three days. During this time insomnia was absolute. The patient had delusions of hearing and sight; heard imaginary persons calling out to him; described their appearance and repeated their words; often fixed his eyes upon and clutched at imaginary objects in the air; was in constant movement and made frequent attempts to get out of bed; had important matters to attend to, and felt injured in being restrained. The pupils of his eyes were rather wildly dilated.

Meanwhile the general condition of the patient was otherwise good. His pulse and temperature were normal. He took a half pint of milk every three hours, and had a perfectly natural action of the bowels every day. Abdominal tension and tympanitis were rapidly disappearing, and convalescence from the peritonitis was progressing favorably. Under these circumstances I refrained from medication, confidently expecting that natural sleep would soon supervene. When, however, the delirium had continued three days with no indication of abatement, I prescribed, with the view of procuring sleep, the following potion:

℞. Potass. bromid.	℥ ss.	
Chloral hydrat.	grs. xv.	
Morph. sulphat.	gr. ⅓	
Aqua	q. s.	M.

Twenty minutes after taking this dose the patient fell into a quiet sleep, which continued sixteen hours, save momentary interruptions every three hours, when nourishment was given. At the end of his sixteen-hour nap the patient awoke cheerful and sane. His subsequent convalescence was rapid, and there was no further delirium.

Two symptoms *usually* met with in *delirium tremens* were not present in this case, namely, anorexia and muscular tremor.

Tetanus following Heaton's Method for the Cure of Hernia.—The editor of the *Peoria Medical Monthly* states that two patients who were recently operated upon by the Heatonian method died a few days afterward from tetanus. A third patient suffered severely from an extensive phlegmonous inflammation of the whole lower limb.

THE INHALATION OF SULPHURIC ETHER, WITH A DESCRIPTION OF AN AUTOMATIC-SUPPLYING INHALER.

By FRANZ HEUEL, Jr., M.D.,

SURGEON TO THE CITY HOSPITALS ON RANDALL'S ISLAND, PROSECTOR TO THE CHAIR OF SURGERY AND INSTRUCTOR IN OPERATIVE SURGERY IN THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK.

The administration of anæsthetic vapors in graduated quantities and controllable by the operator has, for years, been a matter of investigation and study by the medical profession. Many forms of apparatus have been devised to accomplish this end, but the majority, while promising much in theory, fail, in practice, to answer all of the requirements which an instrument of this class should possess. Among the principal objections to these different forms of apparatus may be enumerated that of the unsatisfactory distribution of the anæsthetic fluid, giving rise to disagreeable and, sometimes, disastrous accidents; and the imperfect working of valves, obstructing free respiration and thereby rather asphyxiating than anæsthetizing the patient. Another objection is the difficulty which attends their thorough cleansing, a matter of some weight in these days of asepsis. Aside from which, if there is anything that will disgust a patient at the commencement of the administration of ether, it is an apparatus impregnated with the odor of vomited or expectorated matters. Finally, the intricacy of their construction often renders their management difficult, increases their expense, and, in a great many instances, adds to their bulk and difficulty of transportation.

For ordinary use nothing to date has been found better than the simple napkin or towel folded in the form of a cylinder or cone and having incorporated between its folds a piece of paper to give it the requisite amount of stiffness, thereby preventing the inhaler, when saturated with ether, from collapsing upon the face of the patient and excluding all air. Gross ignorance or criminal carelessness on the part of the administrator during inhalation may produce death by asphyxia, owing to the use of an ill-adjusted apparatus or the crowding upon the face of towels saturated with ether so that the patient is deprived of all air. Such accidents, however, must be exceedingly rare. As a fresh napkin or towel should always be used for each case, the cone will always be in a cleanly condition. This is more than can be said of a good many face-pieces where inhalers are employed. The too frequent removal from the face of the cone, for the purpose of replenishing the anæsthetic, may be avoided by placing a sponge, handkerchief, or piece of lint in the top of the cone to be saturated with ether. When additional ether is necessary it should be poured into the inverted cone as quickly as possible, since a few inhalations of pure air will neutralize, to a considerable extent, the anæsthetic effect already obtained. As has been aptly remarked by Dr. J. B. Roberts,[1] ether, in order to be properly administered, should be given in *large quantities* and with *little* air, while chloroform should be given in *small quantities* and with *much* air, otherwise the stage of excitement will not be overcome without considerable trouble and loss of valuable time; in fact, might lead the administrator to think the patient could not be fully etherized. A widely prevalent idea is that ether should be given with much air. In speaking of this as the "*Ether Folly*," Dr. J. B. Roberts says it "is almost universal. Often have I heard physicians say of a patient, 'He couldn't be etherized; I had to give him chloroform.' Now, the fault was not with the patient, but with the doctor. I doubt there being an individual or an animal in the world that cannot be anæsthetized with ether properly administered. . . . I do not advocate giving ether carelessly, but I assert that it is usually given inefficiently. More danger is to be found in this long-continued inefficient etherization than in the prompt method I describe."

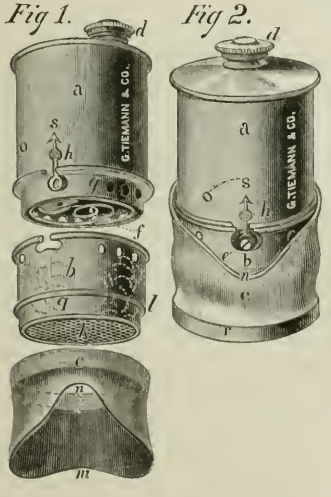
[1] Philadelphia Polyclinic, February 15, 1884.

The amount of vapor inhaled can be easily regulated by removing the cone a short distance from the patient's face and allowing him an admixture of atmospheric air when necessary, looking to its physiological effects rather than any arbitrary rules relative to an admixture with atmospheric air. Too great concentration of vapor need hardly be guarded against, as experience has taught us the comparative safety of inhalation of sulphuric ether.

A simple napkin or towel, therefore, will answer the purpose, and either is as safe as any inhaler can be, although both have their objections, chief among which is the large waste of ether consequent upon their use, especially in a warm room, as only a small quantity of the vapor given off can ever be inhaled; the larger part escapes by the side of the cone, enters the apartment, and interferes with the comfort of the surgeon and his assistants.

Hence, in constructing an apparatus for ether inhalation, the objects to be attained are, first, that it be more convenient, durable, and economical, though just as simple, easily managed, safe, and cleanly as the towel cone; second, that it present no possible difficulty to free respiration either by the inadequate diameter of its respiratory passages, or by inhaling or exhaling valves, which are apt to get out of order; third, that it be self-supplying, with the anæsthetic under perfect control, thereby avoiding the necessity of removing the instrument from the face to replenish with ether; fourth, that it present the air as nearly as possible saturated with ether, at the same time preventing its general diffusion outside of the body without impeding the patient's respiration; and, lastly, that it be inexpensive, and not bulky or cumbersome.

Fig 1. *Fig 2.*



To attain these desiderata I have devised an inhaler, constructed for me by Messrs. Tiemann & Co., of this city, which overcomes in a satisfactory manner all of the difficulties enumerated above. I have used it in hospital and private practice for the last nine months, and have found that it practically fulfils the theoretical requirements of a perfect inhaler.

It is constructed of thin nickel-plated brass, with a rubber face-piece, and is, when closed for transportation, a cylinder six inches long by three inches in diameter, being of convenient size to carry in the pocket, and consists, as shown in the accompanying woodcut, Fig. 1, of three parts, viz.: An ether reservoir, *a*; a respiratory chamber, *b*; and a face-piece, *c*, one placed below the other.

The ether reservoir is cylindrical in shape, holding about twelve fluid ounces. It has at the top, near the side, an opening, *d*, closed by a screw-cap and rubber washer for filling the reservoir. The screw-cap has drilled through its side, below the washer, a small opening, so that when unscrewed, before using the apparatus, by a few turns it will permit air to enter the ether reservoir to supply the vacuum left by the exit of ether through the stop-cock at the bottom.

At the bottom of the ether reservoir, near the side, is an opening closed by a metal stop-cock, *e*, continuous with which, and in a plane parallel to and one half-inch below the bottom, is a spiral coil, *f*, of small copper tubing, having perforations about one inch apart on the top or side nearest the reservoir. This pipe runs from the stop-cock on the side straight to the centre, and then spirally toward the periphery. To steady it, it is soldered at its outer margins to a ring, *g*, projecting from the bottom of the reservoir. The stop-cock has attached to it an index hand and chequered button, *h*, which moves on the outside of the reservoir, and indicates when parallel to the long axis of the reservoir that it is closed, *s*; when moved away from this axis toward *o*, that it is being opened. The ring *g*, projecting from the bottom of the reservoir, fits, by an accurate bayonet joint, into the top of the next cylinder, *b*, which is the respiratory chamber. Both the ring *g*, and the top of the respiratory chamber are pierced with corresponding holes five-sixteenths of an inch in diameter and about three-eighths of an inch apart. These I will designate as the respiratory openings. The bottom of the respiratory chamber is slightly turned in, forming a shoulder upon which is fitted a disk of wire gauze, *k*, to retain the evaporating medium and protect it from expectorated and vomited matter. Around the outside of the respiratory chamber, and one-half inch from the bottom, is soldered a piece of brass wire, *l*, to act as a shoulder to the top of the rubber face-piece, *c*, which fits over the bottom of the respiratory cylinder. Within the respiratory chamber and upon the wire gauze is packed washed sheep's wool, which I have found the best medium of evaporation for the ether, which drops upon it from the spiral coil above. Now it will be seen why the perforations in the copper coil are placed in the upper side, as the ether, when the inhaler is placed in the vertical position for use, must first fill the entire coil before it can escape from the openings, thereby ensuring an equal distribution of the anæsthetic fluid. For the same reason the coil is first run straight from the stop-cock to the centre of the ether reservoir, and then spirally to its periphery, as the inhaler, when in use, cannot always be kept in a strictly vertical position.

The face-piece, *c*, is made of soft vulcanized rubber, shaped like a truncated cone, with notches for the chin, *m*, and nose, *n*, to more accurately fit it to the face. Being made of soft rubber, it adapts itself equally well to a round, thin, large, or small face, a prominent or a flat nose. It will answer as well for a child as for an adult. In the former the chin must be placed within the face-piece, the rubber then covering the nostrils, mouth, and entire chin. In the latter a notch, *m*, in the rubber fits on the chin. At the top, and within the face-piece, a metal ring, *p*, is baked on, which firmly fits over the bottom, *q*, of the respiratory chamber.

In the use of the inhaler, as with any other appliance for the administration of anæsthetics, the following points should be observed:

The patient is first prepared by loosening the clothing about the neck and waist, so that there shall be no obstruction to respiration or circulation. The part to be operated upon is then made freely accessible. Should the patient have any artificial teeth they must be removed, in order to guard against their entering the respiratory passages or being swallowed. The assistant having charge of the etherization should place the patient supine upon the operating table or bed, with the head slightly raised upon a pillow, and should stand at the head o the bed. He should have within easy reach his inhaler

and a dressing forceps, with which to draw out the tongue should it fall back and cause closure of the glottis; or, if necessary, to remove pieces of egested matter. He should also be provided with a hypodermic syringe charged with brandy, whiskey, or diluted aqua ammonia, to use in case the pulse becomes feeble. A basin and towels will be necessary, in case the patient should vomit or expectorate. The assistant administering the ether should pay strict attention to the duties incumbent upon him, to the exclusion of even momentarily transferring his thoughts to the operation, or what may be going on in or about the room.

Everything being in readiness the inhaler, with the stop-cock still closed, is placed vertically over the patient's mouth and nose. It should be supported in this position by placing one hand on either side of the patient's face so that in case of necessity the movements of the head may be restrained. Occupying this position the administrator can easily determine the condition of the pulse from an examination of the carotid, facial, or temporal arteries. In a few encouraging words the patient is directed to "blow out" (exhale) forcibly, regularly, and to continue to do so as long as he can remember. The rubber fitting the face very closely the patient will necessarily be compelled to breathe through the sheep's wool and openings in the respiratory chamber, but neither of these impede in the least free and natural respiration. Hence the feeling of apprehension and sense of suffocation which usually disturbs him at this time when any of the ordinary inhalers are used is, to a large extent, avoided. I direct the patient to "blow out" because I have found this a much better plan with the average person than to request him to inspire deeply, as it is more easily comprehended and he will be obliged to take a deep inspiration as a necessary result of a long exhalation, thereby getting more of the anæsthetic and sooner coming under its effects.

After the patient has made a few respirations in this manner the stop-cock of the ether reservoir is turned on by the thumb of either hand supporting the inhaler on the face, permitting only a few drops of ether to flow in to the absorbent material in the respiratory chamber, so as to gradually accustom the larynx to it. In this manner, and at short intervals, more ether should be added until the full anæsthetic effect is obtained. Having reached this point it will be found that a much smaller quantity will answer to maintain its effect than usual. After being applied, the apparatus should not again be removed from the face, unless an urgent necessity demands it; otherwise the patient, by breathing pure air, would neutralize to a certain extent the effect of the ether already given, and thereby necessarily prolong its administration.

Care should be taken not to oversaturate the material in the respiratory chamber, lest the ether might flow over the patient's face. By the exercise of a little caution this can easily be avoided.

Sometimes, during semi-consciousness, when a patient forgets or refuses to exhale regularly, the respirations may be stimulated by asking him questions, asking him to count from one to fifty, or to say his ABC. Again, if the administrator will endeavor to guide the person's thoughts into agreeable channels, from the commencement of the etherization, by conversing with him on pleasant and familiar subjects, it will often have the effect of inducing pleasant dreams for the patient throughout the employment of the anæsthetic. By these means the patient often passes under the effects without a struggle or being in the least alarmed.

Should it become necessary, after anæsthesia is induced, to turn the patient on his side, the ether reservoir may be taken off and the respiratory chamber with attached face-piece only used, in which case small quantities of ether are dropped as needed from the supply opening, *d*, of the ether reservoir upon the absorbent material in the respiratory chamber. To prevent a too free diffusion of the vapor about the room the supporting hand may be placed over the respiratory chamber.

After using the inhaler, the face-piece should be removed and thoroughly cleaned by placing it in water; the sheep's wool, if desired, can be washed to free it from the products of respiration and then dried to be used again; but it is better to throw it away, as it is very cheap, and use new, fresh wool for each case.

The apparatus can now be put together for transportation, by reversing the face-piece (see Fig. 2) over the respiratory chamber and placing over the bottom the metal cap, *r*, which accompanies the apparatus.

From time to time it is well to put a drop of oil on the stop-cock of the reservoir, as the ether dissolves out the oil and makes the stop-cock turn with difficulty.

Progress of Medical Science.

Simulation of Unilateral Amaurosis.—To discover simulation of one-sided blindness, Dr. Bravais recommends the method of Snellen. This latter rests on the fact that if one writes with a red pencil on paper, the letters written cannot be recognized if seen through red glass. If one holds before the apparently healthy eye a red glass, and before the pretended blind eye any kind of glass, or none at all, and requests the simulator to read the red letters on the paper (which have not been before shown to him), and he can read them, the evidence of his simulating is clear; for if the second eye had really been blind, he would not have been able to recognize the red letters through the red glass.—*Medical and Surgical Reporter*, May 31, 1884.

Vinegar in Post-Partum Hemorrhage.—Dr. Grigg relates in the *British Medical Journal* the case of a "flooder" in whom a profuse hemorrhage was almost instantaneously arrested by the administration of vinegar. The uterus, which was flaccid and gradually dilating, contracted at once after the patient had been given a wineglassful of vinegar, and after the second dose of the acid the hemorrhage ceased entirely. He states that the pupil midwives are accustomed to give this remedy in preference to ergot, as its action is more rapid and certain. So rapid, indeed, he asserts, is its action, that he counsels against its use until after the expulsion of the placenta, for fear of causing a retention of that body.

The Treatment of Phthisis by Overfeeding.—Drs. Broca and Wins believe with Debove that anorexia is one of the chief causes of exhaustion in phthisis, and that a systematic overfeeding of consumptive patients by means of the stomach-tube exercises a most beneficial influence on the disease itself. Nitrogenous food is thebest, especially milk, eggs, and meat-powder. The quantity introduced into the stomach at a time must never exceed one litre. In most cases the food was well digested, the perspiration, cough, and dyspnœa diminished, and the patient increased in weight. In several cases the signs of excavation in the lungs became less distinct, though they never disappeared entirely.—*La France Médicale.*

Contraindications in the Use of Quinine.—Dr. Rabuteau has observed several cases in which nausea, vomiting, and pain in the stomach were caused by the administration of iodide of potassium and sulphate of quinine in combination. He cautions against the simultaneous administration of these drugs, and believes that the unpleasant symptoms were due to the setting free of pure iodide. He further asserts that quinine is contraindicated in women during menstruation. He cites instances in which women, who at other times showed no idiosyncrasy in this respect, were unable to take quinine while menstruating, because of the intense hypogastric pain which invariably followed.—*Allgemeine Medicinische Central-Zeitung*, May 17, 1884.

Hereditary Ataxia.—Dr. Lucas Championnière describes this affection, also called Friedreich's disease, which partakes of the characteristics of both multiple spinal sclerosis and progressive locomotor ataxia. It makes its appearance in childhood or in youth, thus differing from ataxia proper, which occurs during the second period of life. Like both the diseases which it resembles, Friedreich's disease usually occurs in individuals who are affected with some form of nervous disease, as hysteria, epilepsy, general paralysis, etc. Its peculiar feature is that it may attack several children in the same family. As yet it has been observed only a few times, Friedreich himself having seen but nine cases, in three families. An English writer has seen five children, in a family of nine, who suffered with it. Its course is regularly progressive to a fatal issue, again resembling ataxia proper. As to the lightning-pains, and habitual anæsthesia or hyperæsthesia in spots which occur in locomotor ataxia, these are wanting in hereditary ataxia; but there are present motor inco-ordination to an exaggerated degree, and impaired or abolished reflexes. Like multiple spinal sclerosis, this disease exhibits nystagmus, paralysis as to associated ocular movements, and disturbances of speech, while paralytic myosis and blindness are absent. There is also an absence of the bladder troubles, which are so frequently seen in locomotor ataxia, as well as of the gastric and laryngeal crises, and trophic disturbances. It will thus be seen that this disease resembles true ataxia in respect to the spinal symptoms, while it presents characteristics which prevent mistaking it for multiple spinal sclerosis. The anatomical lesion is located in the posterior columns and lateral fasciculi, which explains the clinical resemblance to both of the diseases with which hereditary ataxia has been compared.—*Archives of Pediatrics*, May 15, 1884.

Multiple Spinal Arthropathies.—Dr. J. Boyer reports in *Lyon Médical* of June 1, 1884, the case of an ataxic, forty-five years of age, in whom the trophic disturbances were an early symptom and occurred several years before inco-ordination of movement was marked. The joint troubles were manifested first by a spontaneous luxation of the hip, then the knees became swollen, and finally both feet became also swollen. The tumefaction of the feet was at first œdematous, and later became of a hard osseous consistency, most marked on the dorsal surface. The lesions in the feet were found after death to consist in an œdematous infiltration of the soft parts of the tarsal and metatarsal regions, marked hypertrophy of the head of the astragalus, of the os calcis, and of the scaphoid bone. At the tarso-metatarsal joint there was a complete union of the cuboid and three cuneiform with the metatarsal bones, with hypertrophy, softening, friability, and spongy degeneration of the anchylosed articular surfaces. Arthropathies of the feet in locomotor ataxia are of comparatively rare occurrence, yet, as has been shown by Boyer, Page, Charcot, and Féré, are not so infrequent as was formerly supposed.

The Diagnostic Value of Certain Symptoms in the Diseases of Children.—Professor S. M. Politzer formulates the following concerning the significance of individual symptoms in children's diseases (*Deutsche Medicinal-Zeitung*, May 19, 1884): 1. The symptom of a strongly-marked nasal tone in crying points to the probable existence of a retropharyngeal abscess. 2. A loud and very long-continued expiratory sound, with normal inspiration and the absence of dyspnœa, is significant of chorea major. Sometimes this sound resembles the bellowing of an animal, and may continue for a long time as the only symptom of chorea. 3. A thoracic, sighing inspiration indicates cardiac weakness. This is one of the first symptoms, appearing before cyanosis or pallor of the face, thready pulse, coldness of the extremities, or the other well-recognized signs of weak heart. 4. A marked diaphragmatic expiration, accompanied with a fine, high-pitched whistling, points to bronchial asthma. 5. A marked interval between the end of expiration and the beginning of inspiration renders the diagnosis of catarrhal laryngitis without exudation probable. 6. There is no special significance in the loud, sort of bleating, expiratory sound sometimes observed in infants during the first months of life. It seems to depend upon a modified innervation within physiological limits, and resembles the want of rhythm in the cardiac movements occasionally met with in the early years of childhood. The following symptoms are given by the author as of value in the early diagnosis of cerebral diseases: 1. A peculiar drowsiness, continuing for several days, unaccompanied by fever or other disturbance, is indicative of basilar meningitis. This is a more valuable sign than headache, vomiting, or a slow, irregular pulse, since the latter may occur in various extracranial diseases. 2. A tense, elevated anterior fontanelle points to intracranial effusion. If it be very prominent, resistant to pressure, and without a sign of pulsation, there is almost certainly an intermeningeal hemorrhage. A deeply-sunken fontanelle indicates inanition and a diminished volume of blood. 3. Very slow movements of the eyes, followed by fixity in one position, a vacant stare, and a peculiar lazy closing of the lids are signs of a beginning basilar meningitis. The character of the cry is of value sometimes in the diagnosis. 1. A fit of shrill crying, lasting for two or three minutes, accompanied by an expression of fear in the face, and coming on regularly an hour or an hour and a half after the child has gone to sleep, is the expression of night-terrors. Quinine, given in rather large dose one or two hours before bed-time, is an effectual remedy against this trouble. 2. Periodical crying-spells, of five or ten minutes' duration, coming on sometimes during the day but more frequently only at night, point to cramps in the bladder, provided that we can exclude intestinal or gastric colic. This is speedily cured by emulsion of lycopodium with or without belladonna. 3. Crying while at stool and an evident dread of the act of defecation are signs pointing to fissure of the anus. 4. Hard, continuous crying, expressive of severe pain, together with frequent putting of the hands to the head or rolling of the head in the pillow, are evidences of otitis media or pain in the ear from some other cause. 5. When for days and weeks the child cries on being moved, and when there is also profuse sweating and an elevated temperature, the disease is rickets. 6. Frequent crying, with habitual sleeplessness during the first two years of life, are found in anæmic and poorly-nourished children, or in those with congenital syphilis. Finally, Professor Politzer recounts some other single symptoms which aid in forming a speedy diagnosis. 1. The peculiar physiognomy of children suffering from congenital syphilis. The sinking in of the root of the nose, the sallow complexion, the scanty eyelashes, the yellowish edges of the eyelids, and the rhagades on the underlip are characteristic of hereditary syphilis. 2. A falling together of the alæ nasi, and an absence of all motion in them during inspiration, point to hypertrophy of the tonsils. 3. A weakness and loss of motion out of all proportion to the gravity or duration of the accompanying illness should raise a suspicion of infantile paralysis. 4. A partial loss of hearing after a sickness is often due to a circumscribed meningitis at the base of the fourth ventricle. 5. Depression of the mental faculties occurring after a severe infectious disease is frequently indicative of a beginning acquired idiocy. Strychnine exerts a favorable influence in these cases. 6. Retarded ossification of the skull may imply rachitis. 7. A stiff carriage of children in walking, standing, sitting down, or stooping, is observed in commencing Pott's disease. In children who do not walk there is a painful contraction of the features when they are lifted up or set down. 8. Constant vomiting of all ingesta, lasting for several weeks, in children with large heads but closed fontanelles, is a sign that an acute hydrocephalus is engrafted upon the chronic condition.

The Morbid Anatomy of Malarial Fever.—Vinogradoff, of St. Petersburg, has published an elaborate paper on this subject, based on his extensive experience in Bulgaria during the Russian-Turkish war, 1877–78. Some of the main results of his investigations are as follows: Like other infectious diseases, malarial fever manifests itself in a series of lesions of internal organs. The most generally spread lesions is parenchymatous inflammation, which affects chiefly the liver, spleen, heart, and kidneys, but occurs also, though less constantly and in a less considerable degree, in the lymphatic glands, nerve-centres, gastro-intestinal and sudoriferous glands, testes, and striated muscles. The parenchymatous changes consist mainly in opaque swelling of cellular elements, with their subsequent hyperplasia, or atrophy, or degeneration. In the liver the most frequent issue of a parenchymatous inflammation is local limited atrophy (though in some cases there occurs a diffuse hyperplasia of the parenchyma, as Kelsch and Kléner's observations show). The malarial parenchymatous inflammation of the kidneys, in a certain proportion of cases, shows a tendency to take a progressive development and to pass into an ordinary form of Bright's disease. The parenchymatous alterations in the heart consist in slight opacity and swelling, as well as in atrophy and brown pigmentation of muscle-cells. The parenchymatous changes in the spleen are almost exclusively limited to the lymphoid elements of the pulp. The malarial interstitial inflammatory process is spread less extensively than the former, and affects mainly the liver, spleen, and kidneys. The interstitial inflammation of the liver is characterized by the development of older fibrous tissue and young granulation-structure. The formation of the new interstitial tissue is not spread uniformly all over the organ, but is limited to certain regions, being localized mostly in the neighborhood of branches of the portal vein and between the lobules. In the spleen, the development of new interstitial tissue proceeds along the veins of the stroma; the capsule, also, being not unfrequently found thickened. In the kidneys the development of the interstitial tissue is observed both in the cortical and in the medullary substances, and, as in other organs, is of a diffuse character. The interstitial changes occur also in the deep muscular layers of the heart, in the testes, and in the lymphatic glands, especially in those situated within the abdominal cavity. The distribution of melanotic pigment over the organs is connected with lesions of blood-vessels. The vascular changes consist at first in swelling of the epithelioid lining of the capillaries, which may be so considerable as to lead to complete obliteration of the lumen of the vessel. Red blood-corpuscles become impacted between the enlarged epithelioid cells, and are gradually transformed into fine granules of yellowish and light-brown coloring matter. The latter is taken up by leucocytes and epithelioid tissue. The epithelioid cells undergo either proliferation, or fine granular disintegration, leaving then heaps of pigment-granules in the shape of scales, described by Frerichs and others. Fatty degeneration of the epithelioid lining of the capillaries of the brain is, according to the author, a most constant phenomenon in malaria, and is especially pronounced in the sites of extravasations. Pigment-masses are accumulated mainly in the spleen; and here again chiefly in the pulp, interstitial tissue, and vessels. The cells of the reticulum undergo partly proliferation with subsequent transformation into fibrous products, partly regressive modifications (albuminous and fatty degeneration). In the period of swelling many of these cells, as well as large lymphoid elements, absorb blood-corpuscles, which are slowly disintegrated and disappear, leaving light and dark-brownish pigment. In the bone-marrow, pigment is mostly found in the stellated cells of the reticulum. The pigment-masses accumulated in the liver are not formed on the spot, but arrive from the spleen through the vena portæ. Two main sources supplying pigment in melanæmia are the spleen and the bone-marrow. According to the author, this fact is proved by the occurrence in them of striking phenomena of disintegration of blood-corpuscles, by a considerable accumulation in them of coloring matter, and by their anatomical arrangements allowing pigment to easily enter into the circulation. Another source of pigment-formation is given in the migration, with subsequent disintegration, of red blood-corpuscles, observed in the brain. When disintegrating, some of the blood-corpuscles coalesce and form hyaline or diaphanous bodies or scales, identical with those found by Popoff in the brain of uræmic men and of uræmic and cholæmic dogs. Beside the liver, spleen, bone-marrow, and brain, the author observed deposition of coloring matter in the capillaries of the testes, gastro-intestinal mucous membrane, and papillary layer of the skin; in the lung it was seen in the interstitial tissue and epithelium of the alveoli; in the lymphatic glands it was present chiefly within leucocytes. As to the pigment itself found in malaria, it does not differ in any way from that derived from red blood-corpuscles in other diseases.—*London Medical Record*, June 16, 1884.

Jequirity in Persian Practice.—A Persian physician stated to Dr. Polak that jequirity was in frequent use by the oculists in his country in the treatment of pannus, corneal opacities, and pterygium. For the ensuing inflammation, usually lasting three days, they used local applications of milk, decoction of althæa, and mucilage of plantago psyllium (fleawort). If necessary, the treatment is repeated in fifteen or sixteen days, but never more than four times in succession.—*Centralblatt für Praktische Augenheilkunde*, May, 1884.

Resection of Muscles in Infantile Paralysis.—Mr. Keetley has recently undertaken the resection of part of the quadriceps extensor femoris in a case of infantile paralysis causing inability to extend the right knee. By shortening the weak, relaxed, and partly atrophied muscle, the operator hoped to increase its strength, with the aid of electricity during recovery from the operation. Mr. Willett has already resected the tendo-Achillis in paralytic talipes calcaneus, with good results, finding that the shortening of the abnormally elongated tendon enables the muscles of the calf to regain some portion of their lost functions, especially when the muscular wasting has been chiefly due to disease, and has not advanced too far. Mr. Keetley's patient was a boy aged six, who had suffered from paralysis of the right lower extremity for four years, and the muscular atrophy was not complete, yet sufficient to prevent thorough extension of the knee. A longitudinal incision was made in front of the thigh, about three inches in length, ending an inch above the patella; the skin was held apart by retractors, and one inch of the entire substance of the quadriceps was cut away with scissors, about two inches above the patella. The separated ends were united by means of about one dozen carbolized catgut-ligatures. Esmarch's bandage had been applied before operation, and only one small artery required ligature. The wound was dressed with a small iodoform-pad and carbolic gauze, and the limb placed on a back-splint at an angle of sixty degrees with the bed. The wound healed rapidly and perfectly, but as the operation was performed on May 5th, it is as yet too soon to determine the results as regards the function of the limb.—*British Medical Journal*, May 31, 1884.

Treatment of Furuncle.—The following treatment of furuncles is highly recommended in the *Revue Médicale* of June 7, 1884. The boil itself and the inflamed zone surrounding it are covered with a soft paste of honey and powdered arnica flowers, spread upon linen. The application is renewed every two hours until the pain and soreness have entirely disappeared, which they do by the second or third day at the latest. If the application is made in the initial stage, the boil is aborted within twenty-four hours.

False Pregnancy.—Dr. Delgado reports the following rather remarkable case of spurious pregnancy: A woman, aged thirty, married, separated accidentally from her husband for several months, presented herself in the hospital at Valladolid for advice, saying that she was pregnant and out of her reckoning. The greater part of the signs of pregnancy existed—suppression of the menses for about nine months, gradual enlargement of the abdomen to full-term size, increase of the breasts with pigmentation of the nipples, vomiting at the beginning and end of the pregnancy. She said she felt the movement of the child. On examination, ballottement, movements of the fœtus, and fœtal heart-sounds were absent. After four days in the hospital, labor-pains began, terminating by the expulsion of a great quantity of blood in dark clots and liquid by the vagina. At the same time there was violent hæmatemesis, which had to be controlled with ice and perchloride of iron. Three years later, when she had again been living with her husband for eleven months, the same series of phenomena occurred; the hæmatemesis, however, being less intense. On the most careful examination, no trace of mole, or of remains of placenta or fœtal membranes, could be discovered.

An Instance of Nervous Impressionability.—Dr. Blykaerts relates a curious case of a boy, thirteen years of age, who resembled Samson in that the cutting of his hair exerted an extraordinary influence upon him. At the first clip of the scissors he would begin to tremble, then he would suffer from ringing in the ears, vertigo, and dimness of vision. Then the pulse would become thready, and soon a state of complete syncope would come on. This would last for five or six minutes, and would then be succeeded by vomiting. The child was in apparent good health, but never had convulsions, and came from a family free from epilepsy. The treatment consisted in first accustoming the boy to handle the scissors himself and to snap the blades together. Then for a time one hair was cut each day, then a lock, and so on, until finally the peculiar impressionability was entirely overcome.—*Le Progrès Médical*, June 21, 1884.

Some Points Concerning the Physio-pathology of the Blood-vessels.—According to Ferraro (*London Medical Record*) the blood of diabetic patients under microscopic examination presents nothing characteristic to distinguish it from that of a healthy individual. The spontaneous coagulation takes place normally. In diabetics, the blood may coagulate in any point of the circulatory system, and give rise to the formation of thrombi causing more or less obstruction, wherever the conditions favorable to its spontaneous coagulation are found. The blood of rabbits surcharged artificially with glucose coagulates, but more slowly. When the intima of a large artery (the carotid) of a dog is destroyed either by mechanical or chemical means, or by a very high temperature, if the vasa vasorum be not injured at the same time, the blood circulating in the artery does not coagulate. On the other hand, there is thrombotic occlusion of the artery whenever the middle coat is injured as well as the intima, and especially if, besides the intima, the vasa vasorum have been destroyed. This experimental lesion of the intima of the carotid of the dog is similar to that which diabetes mellitus produces in man, in whom the intima of the arteries is often lost from desquamation of its cells, *endoarteritis diabetica desquamativa*. In both cases the circulating blood does not coagulate in the arteries despoiled of their intima, if the rest of the wall of the vessel be alive and nourished as in the normal state. Endarteritis diabetica, desquamative in form, described by the author in the organs of five diabetics, finds support in these experiments, the object of which was to produce in animals by other means a lesion of the intima of the arteries similar to that which diabetes produces in man. The results obtained agree in showing the influence of a vessel-wall thus altered on the blood circulating in the vessel. It is then possible that from certain morbid conditions the epithelioid lining of an artery or the whole intima may be lost, and yet for the blood traversing this vessel not to coagulate and not to form a thrombus, if other circumstances favoring thrombosis do not intervene. This being possible, since demonstrated by pathological observation in diabetes mellitus and by experiment, it must be held that the influence of the living arterial wall on its contained blood, by which its spontaneous coagulation is prevented, is not due exclusively to the epithelioid layer investing the internal surface, but also to the rest of the wall of the vessel. If the epithelial stratum be destroyed by any morbid condition whatsoever, the rest of the wall, if alive, may exercise the same influence on its contained blood. In the normal condition, the intima of the arteries receives the nutritive plasma partly from the blood circulating in the interior of the vessel, by which it is constantly bathed, and partly from that circulating in the vasa vasorum of the contiguous middle coat. If the vasa vasorum be destroyed, the neighboring intima is not always able to retain its vitality.

Cure of Hydrarthrosis by Electricity.—A patient was admitted to the service of Dr. Castano, of Buenos Ayres, suffering from hydrarthrosis of the knee. After a varied treatment by flying blisters, cauterization, compression, etc., had been tried without success, it was determined to employ the constant current from a battery of thirty-six elements. The result was most gratifying. By the fourth day the circumference of the articulation had been reduced some four-fifths of an inch; on the seventh day no fluctuation could be perceived, and on the ninth day the joint measured exactly the same as its fellow. Walking was difficult at first, but was much facilitated by the application of an elastic bandage.—*Revue Médicale*, June 7, 1884.

The Formation of Urea.—MM. Gréhant and Quinquand have been conducting some further investigations as to the places of formation of urea in the economy. They have estimated several times the amount of urea in the blood going to, and in that coming from, the spleen and liver. The blood from the hepatic, portal, and splenic veins always contained more urea than arterial blood taken from the carotid arteries. From this they conclude that the abdominal viscera form urea. It is also asserted that the proportion of urea is practically the same in arterial and venous blood from the limbs and head. Lymph and chyle collected from the thoracic duct after section of the medulla oblongata and the employment of artificial respiration have always been found to be richer in urea than venous or arterial blood.—*The Lancet*, June 14, 1884.

The Death-rate of Phthisis.—In a work recently published by Dr. Wurzburg on "The Influence of Age and Sex on the Mortality Due to Tubercular Phthisis," some of the generally accepted notions on this subject are overthrown. The opinion seems to have been commonly entertained that the greatest number of deaths from consumption occurred at about the twentieth year. But the statistics collected by Dr. Würzburg prove that, after a large percentage of infancy, the minimum death-rate is met with from three to fifteen years, and that then the rise is a gradual and steady one up to the period between sixty and seventy years. After that age a rapid decline is noted. These statistics are for Prussia, and embrace a period of five years from 1875 to 1879. The same condition has been noted in Sweden and the United States, with this difference, that in these countries there is no decline after the age of seventy years. In England, however, the highest death-rate falls between twenty and thirty years, and the lowest between fifty and seventy years. There is but a very slight difference in the percentage of deaths from tubercular phthisis between the city and the country.—*Medical and Surgical Reporter* June 14, 1884.

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PERVERTED SEXUAL INSTINCT.

SIR THOMAS BROWN once wrote, platonically, that the act of procreation was "the foolishest act a wise man commits in all his life. Nor is there anything that will more deject his cooled imagination." The physician learns, however, that man, so far from tending toward this ideal, is more apt to show instincts of a violently opposite character, and finds, far down beneath the surface of ordinary social life, currents of human passion and action that would shock and sicken the mind not accustomed to think everything pertaining to living creatures worthy of study. Science has indeed discovered that, amid the lowest forms of bestiality and sensuousness exhibited by debased men, there are phenomena which are truly pathological and which deserve the considerate attention and help of the physician.

Some twenty years ago, a lawyer of Hanover wrote an article describing a form of sexual perversion to which he was himself subject, and defending the acts to which his morbid instincts prompted him.

In 1869 Westphal reported two similar cases, and described the condition as a congenital sexual perversion (conträre sexualempfindnng). Subsequently several other such histories were published, and in 1877, Krafft-Ebing, in reporting an additional case, gave a careful analysis of the condition, classifying it among the psycho-degenerative states. Drs. J. C. Shaw and G. N. Ferris, in the *Journal of Nervous and Mental Diseases* for April, 1883, presented a collection of previously reported histories, omitting, however, one which was published in THE MEDICAL RECORD. These gentlemen also related a case of their own. Up to that time only twenty-one cases were on record, three being reported by Americans, the rest mainly by Germans, and none at all by English observers.

In a recent number of the *Irrenfreund* (vol. xxvi., No. 1, 1884), Krafft-Ebing has reported six more cases. One of these was that of a merchant, now living in America, who wrote to Krafft-Ebing a letter which can but strike the attention. The patient says: "I have read your article in the *Zeitschrift für Psychiatrie.* Through it I am, in common with thousands of others, rehabilitated in the eyes of every thinking and generous man, and I offer you for it my warmest thanks. You very well know how those in our condition are despised and execrated. Though science at this late time has undertaken to investigate it, it still remains the object of detestation. I think that Ulrichs [the Hanoverian lawyer referred to] underestimates the number of its victims. In my native city (of 13,000 inhabitants) I knew personally twelve 'Urnings.' In a city of 60,000 inhabitants I know at least eighty." The writer then goes on to relate his own history.

The victims of this perverted instinct have been termed by Ulrichs and others "Urnings." If their number is as great as Krafft-Ebing's correspondent indicates, it is certainly a matter of importance. It is not improbable, however, that some of these are rather examples of vicious lust than of pathological perversions.

These so-called "Urnings" are persons whose sexual feelings can only be aroused by intimacy with their own sex; they have an irrepressible desire to act the part of the opposite sex. If men, as is generally the case, they try to dress, or walk like, and imitate the habits of women. The very act of dressing in women's clothes excites the sexual sense. They have a repugnance to normal sexual intercourse, and have no desire for it. They attach themselves to some other man, and form sometimes purely platonic friendships with him. More generally they find some fellow "Urning" with whom the sexual passion is easily excited by mutual masturbation or intercourse per anum. They sometimes form attachments for boys[1] or old men. They often masturbate while having lascivious images of the male beloved before their imagination.

In the reported cases of congenital perversion, the abnormal instinct begins oftenest as early as the eighth or ninth year, but shows itself at first, perhaps, only in an inclination to adopt the manners and practices of girls or women. The victims show the somatic basis of their trouble in various ways. There is often an hereditary psychopathic or neuropathic taint. Epilepsy is sometimes present. There are noticed in some cases, though not often, defects of the genital organs, such as hypospadias or epispadias, small or defective testicles. The hair on the face is sometimes thin, the voice almost always soft. The "Urnings" have a mincing gait, and sometimes the hips are broad like those of women. Exacerbations of the perverted feeling appear periodically. It may be accompanied with melancholia and end in insanity or suicide.

The mental peculiarities of these unfortunates have much in common. They are of the artistic, poetical, and imaginative temperament, often exhibiting a tendency to rather weak philosophizing. Sometimes they are of a vigorous understanding. In most cases there is great mental distress felt through a consciousness of their unnatural instincts. Two or three have, like Ulrichs, boldly defended their practices.

Medical jurists have devised a number of technical terms to cover the practices that follow from these sexual aberrations, which, it should be borne in mind, are still classed in all cases as crimes. The intercourse between woman and woman (Lesbian love) is known as tribadism. That between man and man, or unnatural intercourse between man and woman, is known as sodomy. When the victim is a boy it is known as pæderasty.

If congenital perverted sexual instinct is a pathologi-

[1] "Thou shalt not corrupt boys," is one of the commandments in the Teachings of the Twelve Apostles.

cal rather than a vicious condition, the query arises whether there is any remedy for it. The history of cases reported shows that sometimes the instinct is cultivated and intensified by bad surroundings in childhood, such as, for example, the exclusive society of women and immoral nurses. Excessive sexual indulgence seems to increase it, and we may question whether in a few cases the condition would have ever developed, were it not for an early abuse and misdirection of the sexual powers. In conditions of nervous exhaustion and weakness, the symptoms are exaggerated, and Krafft-Ebing, in his last communication, reports the case of a married man, previously healthy, who experienced an entire change in the sexual feeling, which lasted for twenty-five years. He was then cured by general faradization and other tonic measures.

In conclusion, we believe it to be demonstrated that conditions once considered criminal are really pathological, and come within the province of the physician. We have undertaken, therefore, the disagreeable task of laying some of the facts regarding sexual perversion before our readers. The profession can be trusted to sift the degrading and vicious from what is truly morbid.

We cannot do better than append the conclusions which Krafft-Ebing has reached upon this subject. He says: "1. There exists a congenital absence of sexual feeling toward the opposite sex, at times even disgust of sexual intercourse. 2. This defect occurs in a physically differentiated sexual type and with a normal development of the sexual organs. 3. Absence of the psychical qualities corresponding to the anatomical sexual type, but the feelings, thoughts, and actions of a perverted sexual instinct. 4. Abnormally early appearance of sexual desire. 5. Painful consciousness of the perverted sexual desire. 6. Sexual desire toward the same sex. 7. The sexual desire remains purely platonic or finds gratification in mutual onanism, or in feeling of the object of the affections. Often there is self-pollution, but for the want of something better. 8. There are symptoms of a morbid excitability of the sexual desires, together with an irritable weakness of the nervous symptoms, so that sensuous feelings, magnetic sensations, and even pollutions occur in simply touching the object of the affections. 9. The perverse sexual impulse is abnormally intense and rules all thought and sensation. The love of such individuals is excessive even to adoration, and is often followed by sorrow, melancholy, and jealousy. 10. People afflicted with this abnormity frequently possess an instinctive power to recognize one another."

In this last conclusion we cannot agree. The power of mutual recognition is not instinctive but acquired.

GERMAN MEDICAL JOURNALS.

The German-speaking race is abundantly supplied with medical journals of every conceivable kind, and they reflect very well the character of the German medical mind. The number of special journals is particularly great. There are quarterlies, and monthlies, and even weeklies devoted to gynecology, neurology, psychiatry, ophthalmology, etc.

The leading journals are the large weeklies: the *Berliner Klinische Wochenschrift*, the *Deutsche Medicinische Wochenschrift*, the *Wiener Medizinische Wochenschrift*, etc. These are not framed upon the English or American plan. They rarely contain any formal editorials, and but very brief notes of current events. They are filled with heavy original articles, most of which are so laboriously scientific and minutely technical that they would appear to the American mind extremely dull. Interspersed with these, however, there are not rarely the rich original contributions to medical science which makes Germany so famous. A characteristic of German periodical literature is that it is almost all written by the Professors or their assistants, or by some of the various instructors at the universities. One hears almost nothing from the general practitioner who is so prominent a person in American journalism. There has of late, to be sure, been something of a revolt started. Dr. Julius Grosser, a practising physician at Prenzlau, has dared to start a weekly journal in the interest of his confrères, and despite the frowns of the great men of the universities. His journal, the *Deutsche Medizinal-Zeitung* gives a practical summary of progress in all departments of medicine, and must prove extremely useful. A few other journals of a somewhat similar character exist, one, the *Central-Zeitung*, being published, like some of the French journals, three times a week. A further evidence of the effort which is of late being made by German journalists to supply the practical needs of the physician is the growth of therapeutical literature. There has recently been established an excellent journal devoted to therapeutics alone, and a popular and often-quoted monthly journal, called *Memorabilien*, edited by Dr. Betz, devotes itself chiefly to therapeutics. The *Zeitschrift für Therapie* is almost everything but therapeutical.

The various *Archives*, in which are contained the results of laborious researches in physiology, pathology, pharmacology, and clinical medicine, embody a mass of literature to which there is no parallel in other countries.

A very large part of German periodical literature consists of minute, carefully recorded observations, pathological, physiological, and clinical. These cover not only things which are practical but also everything having a bearing on medicine. This habit of careful observation and detailed statement makes an article very tedious; but it is the method which ensures progress in a science like that of medicine. In order to furnish the essentials of all these elaborately recorded studies, and to allow a person with moderate leisure to follow the progress in the various departments, journals devoted simply to abstracting and condensing are published, and have now become quite numerous. There are the various monthly and yearly *Jahrbücher* and *Jahresberichte*, besides three or four weeklies, which are entirely devoted to this kind of work. Indeed, the summaries of medical progress are nowhere done with so much painstaking conscientiousness as by our German confrères. They err only in sometimes analyzing with too much care articles which are worthless. In this kind of work, the Germans can teach the profession of other nationalities. In the technical part of journalism, or journalism proper, they are far behind England and America. The jour-

nals do not voice the opinions of the profession at large; they have no strong writers, and when the weekly notes are lengthened out into the dignity of editorial it is generally to express some comment on local and personal matters.

A CRITICISM UPON THE VALUE OF SULPHATE OF CINCHONIDIA (CINCHONIDINE).

It is known that the sulphate of cinchonidia is very much used as a cheap substitute, and probably as an adulterant, of quinine. A recent contribution to the pharmacology and therapeutics of this drug, by Professor J. Marty, of Rennes (*Bulletin Général de Thérapeutique*, May 30, 1884), is, therefore, of much interest. Having given it to healthy persons, and in various types of malarial fever, he comes to the conclusion that cinchonidia has two serious defects: 1. Its extreme variability of action in healthy and sick men. 2. The ease with which it may provoke toxic manifestations in doses necessary to produce its therapeutic results.

Professor Marty thinks that it should be given in doses double those of quinine, and that it is then an efficient agent in the benign types of malarial fever. For the pernicious types it should not be trusted. It does not act well in the various forms of malarial headache and neuralgia.

We believe that Professor Marty's conclusions will be found to harmonize in the main with the practical experience of those who have used it in this country. Cinchonidia is a very useful substitute for quinine in the milder affections in which that drug is indicated, but it is liable to disappoint the physician in some cases.

RECTAL ANÆSTHESIA.

M. A. Poncet publishes in the *Lyons Médicale* an interesting contribution to the subject of rectal anæsthesia. It appears that M. Roux, in 1847, first thought of and suggested the plan of giving ether by the rectum (*Compt. rendu de l'Academie des Sciences*, February 1, 1847, p. 146). He did not, however, try it himself. Three months later Dr. Vincente-y-Hedo published the results of his experiments in injecting liquid ether into the rectum of rabbits (*Gazette médicale de Paris*, 1847, p. 317). Naturally, these experiments led to no practical results. A little later M. Marc Dupuy injected ether and water into the rectum of animals and produced insensibility, but with so much injury to the mucous membrane that the experiments were not repeated on man. In the same year, 1847, Pirogoff, of St. Petersburg, first produced anæsthesia in man by the introduction of ethereal vapor into the rectum (*Recherches pratiques et physiologigues sur l'etherization*, Saint-Petersbourg, 1847). He employed the new procedure in a number of cases, recognized its advantages, and urged its adoption. Different apparatuses were constructed, and the use of ethereal vapor per anum was adopted by Simonin at Nancy, for a year or two subsequently.

After this, it seems that the subject was dropped entirely for over thirty years. According to M. Poncet, there is no record of the employment of rectal anæsthesia until M. Mollière reported his cases last spring. Since that time, aside from ten trials made in this country, rectal anæsthesia has been made the subject of a communication to the Société de Biologie by M. Bebierre (*Journal de Médecine de Paris*, April 19, 1884). M. Delore has published an article upon the same subject (*Gazette des Hôpitaux*, March 20, 1884), and M. Dubois has recommended the use of chloroform vapor per rectum instead of ether.

M. Poncet now comes forward with the record of five cases in which he has himself employed rectal anæsthesia with ether vapor; and he sounds a note of warning against this new procedure. In four of his cases, success was tolerably good, but in the fifth, that of a woman thirty-seven years of age, severe collapse took place after insensibility had been produced, and it was with the greatest difficulty that the patient was restored.

M. Poncet is most decidedly of the opinion that the administration of ether per rectum is a dangerous procedure, and one not to be adopted by careful surgeons. This is the view which is now held in New York.

PROFESSIONAL "PIDGEN" ENGLISH.

No; not quite that bad perhaps, but some of the lucubrations of our writers are more remarkable for ambiguity than for scientific value, and certainly far richer in bad grammar than in sound pathology or therapeutics. We are aware that not every practitioner has had the advantage of a collegiate education; some apparently never graced the benches of an "old-field" school. But there is a notable proportion of college-bred men in the profession, men who have an A.M. or an LL.D. after their names, but who write vile English, both as regards the wrong use of words and the wrong use—or non-use—of grammar.

A very generally abused word in medical literature is, perhaps, "apt." The persistency with which writers use this word for "likely" and "liable" is really marvellous. The following are a few examples of the wrong use of words, found within a few minutes during a cursory glance at current journals: medical doses for medicinal doses, dilation for dilatation, ligated for ligatured, diagnosed for diagnosticated, teaspoonsful for teaspoonfuls, official for officinal, analogous for similar, and entroitus for introitus.

There is very common misuse of "where" for "in which." Some—almost every—writer speaks of a "case where," *e.g.*, "cases are on record where post-mortem of persons," meaning "in which the post mortem examination," for *post-mortem* should never be unaccompanied by the *examination*. A writer in a current journal says: "We have two classes to treat—young women and married women," leaving the reader to infer that all young women are single and all married women are old. Another has manufactured a new word—diuretico-mucilaginous. We have an idea that he is the same who says: "He began to pass large quantities of dissolved stone," though he was not the author of the following: "Dr. ——, of ——, wants treatment for cross-eyes that came suddenly on a girl. This is paralysis of the rectimuscles of the eyeball, internal or external accordingly as the squint is con or divergent." It has long been known that woman rules the household, but a correspondent of a St. Louis *Comic Medical Journal* says: "Menstruation is evidently the chief governor of woman and her

family relations." This is important information, and should be strictly kept from the ears of "woman's rights" women. Another writer in the same journal has with a stroke of the pen cured every adult dyspeptic in the country: "Dyspepsia is par excellence a disease of infancy." We wish it were true. But there is a dangerous man somewhere whose friends especially should know about him. He says: "I have found the following to be very beneficial in the treatment of gonorrhœa, which I would like to give to any one who wants it, hoping it will be of some benefit to the medical fraternity." He should mend both his morals and his grammar. But seriously, the bad English of the profession is deplorable.

THE PROPOSED S. D. GROSS PROFESSORSHIP OF PATHOLOGICAL ANATOMY.

We have received a circular asking us to assist in the effort to secure, "in some medical school," the endowment of a memorial professorship to be designated the S. D. Gross Professorship of Pathological Anatomy.

We will cordially support any movement looking toward the commemoration of the remarkable work and noble character of the late Professor Gross. We but voice the sentiments of many, however, when we ask if some fitter memorial for the general profession to contribute to could not be found than that of a professorship in a private medical college. This chair naturally should be in Jefferson Medical College, though it is not so specified. And many, perhaps most, physicians would prefer to contribute simply to the memory of Gross, not at the same time to the resources of a prosperous medical institution.

A LESSON TO BE REMEMBERED.

On the morning of Friday, September 1, 1854, the cholera suddenly attacked a number of persons residing in the sub-district of Berwick, in the city of London. The outbreak was confined to the immediate vicinity of a well situated on Broad Street.

This well was the centre of an infected district: "a person starting from thence and walking at a moderate pace would have got beyond its limits in three minutes" (English Rivers Pollution Reports). During the month of August preceding the outbreak, only twenty-six cases of cholera were reported to the London authorities from this district (Berwick).

The epidemic reached its height on September 2d, and declined about fifty per cent. on the 5th; after which it dwindled off until the 20th, this day being the first on which no death took place. The total number of deaths in the district from the 1st up to this date was 609.

Investigation showed that about seventy-eight hours before the great outburst of the disease a child was attacked with cholera in the house No. 40 Broad Street, and its dejections were emptied into a drain which ran within a few feet of the well. The water from this well was very popular with the neighborhood.

Analysis showed that it contained in 100,000 parts 137 parts total solids and 7.72 parts organic and volatile matter. It was clearly shown that nearly all the persons attacked with the disease had drank the water from this well.

In one case, an old lady and her niece, residing at a distance, had been in the habit of having the water sent to them daily. They both had cholera, while none of their neighbors contracted it.

The history of this well should be engraved on the mind of every sanitarian. The activity displayed by health authorities in searching out and stopping the water from city wells shows that it has not been lost on them. The use of such water for the preparation of aërated drinks is the more dangerous, since such beverages are prescribed for invalids.

The history of the cholera in Manchester and Glasgow illustrates most forcibly the importance of a pure water supply for cities. Until 1851 the people of Manchester and Salford obtained water partly from wells and partly from the River Irwell. Both these sources were much polluted with excrementitious matters.

In 1851 a pure supply of water was introduced into these towns. The following figures, taken from the report of the Rivers Pollution Commission, show the mortality during the polluted and pure-water periods:

Total mortality in Manchester and Salford, polluted-water period: 1832, 890; 1849, 1,115; pure-water period: 1854, 50; 1866, 88.

The history of the disease in Glasgow affords evidence equally conclusive. Until 1859 the water supply was drawn from the Clyde, and was polluted by the drainage of towns higher up the river. After that year a pure supply was obtained from Loch Katrine.

Total mortality in Glasgow, polluted-water period: 1832, 2,842; 1849, 3,772; 1854, 3,886; pure-water period: 1866, 68. Mortality per 10,000 of population, polluted-water period: 1832, 140; 1849, 106; 1854, 119; pure-water period: 1866, 16.

These facts are not new to sanitarians who have studied the subject, and they can be multiplied to any extent desirable to prove the intimate connection of cholera with water supply. We repeat, then, we are glad to see that the health authorities in this city are so thoroughly alive to the necessity of inspection of wells, and are so strenuously in favor of preventing the use of the water from them for drinking purposes.

Cholera and the Price of Disinfectants.—The alarm over cholera has caused a marked increase in the demand for disinfectants and cholera drugs. A member of a large drug firm in this city states that opium has advanced twenty-five cents per pound in the past few days. It may be questioned whether the rise in opium comes from the scare or the shortness of the crop this year. Sulphate of morphine is twenty cents per ounce higher and oil of peppermint has recently advanced. The demand for camphor is increasing, and a rise is expected. Chloride of lime is being largely purchased, and is twenty-five cents per hundred pounds higher. Carbolic acid crystals have advanced from twenty-five to thirty per cent. There is considerable buying by France in England also.

The Chicago Medical Journal appears in a new and much improved dress, and announces as its editors Drs. James Nevins Hyde, W. W. Jaggard, and Harold N. Moyer.

News of the Week.

Death from the Bite of a Rattlesnake.—A snake-charmer in this city, named James Reilly, was bitten in the hand by a rattlesnake, and died in forty-eight hours in consequence. Large amounts of whiskey and ammonia were given, but without avail. An autopsy on the body was made by Dr. W. H. Welch.

The Summer Corps of Sanitary Inspectors went to 4,504 houses last week, and visited 24,099 families, finding 811 sick persons, to whom they gave prescriptions or medicine, and tickets for excursions. Of the patients, 365, nearly all of whom were children, suffered from diarrhœa, 118 had trouble with the respiratory organs, and 70 were sick of diseases.

Lepers to be Put on Exhibition.—A unique variety of the moral show has been devised by a Californian, calling himself Dr. C. C. O'Donnell. He has secured two Chinese lepers with a large portfolio of photographs of other cases, and he proposes to travel East and exhibit them. The show is in the interest of anti-Chinese immigration. Dr. O'Donnell claims that there are between two hundred and two hundred and fifty lepers in San Francisco already, and that the disease is increasing.

Faith-Surgery.—The following is an interesting specimen of advertisement that appeared recently in a daily paper: "Faith Surgery.—My dislocated shoulder and broken collar-bone instantly set and cured by Rev. Dr. ——, Christian Healer [address is here given]. Was able to do heavy family washing next day. Mrs. ——. Doctors and ministers can interview me."

The Congress of German Naturalists and Physicians will be held at Magdeburg, September 18 to 23, 1884. The medical and surgical work at this meeting promises to be very considerable. Sections are organized for all the specialties, and many prominent physicians have already furnished the titles to the papers.

Prizes for Surgical Essays.—The Medico-Surgical Society, of Bologna, has offered two prizes of 500 lires each. First prize, Sgarze, for the best essay on The Surgical Treatment of Pulmonary Cavities. Second prize, Gajani, The Surgery of Diseases of the Stomach. The essays must be written in Italian, French, or Latin.

The Progress of Cholera in Europe.—The epidemic of cholera continues to increase, as will be seen by the accompanying figures of deaths: July 9th, Toulon, 11; Marseilles, 23. July 10th, Toulon, 11; Marseilles, 59. July 11th, Toulon, 13; Marseilles, 74. July 12th, Toulon, 22; Marseilles, 65. July 13th, Toulon, 35; Marseilles, 57. July 14th, Toulon, 11; Marseilles, 66. July 15th, Toulon, 20; Marseilles, 69. Cases of cholera are said to have occurred in the surrounding country. Two cases have been reported also in Transylvania and one at Nimes, France. The reported occurrence of cases in Paris and Lyons is denied. Dr. Koch continues to assert that the disease will spread throughout Europe, but thinks that it may be kept from America this year at least. The Paris Académie de Médecine has been asked to give an official opinion regarding the cholera, its mode of prevention, etc. This the Académie seems disinclined to do because the Government refused to take its advice as to holding the fête of July 14th. If the Académie treats cholera in the same discursive manner that it did typhoid fever, it will be a year before its opinions will be formulated. Nearly all countries have quarantined against the French Mediterranean ports. Our own Government will oblige vessels from Europe bound for the United States to have certified clean bills of health from the American consuls.

The Number of Cases of Small-pox in London last week was 1,200. Some parts of the city are reported to be in a very filthy condition.

Disinfecting Toulon.—"Every means of disinfection at Toulon," says *The British Medical Journal*, "has been adopted. The city is watered with a solution of carbolic acid and chloride of lime. Those who have died from cholera are buried at a great depth underground. Railway travellers are sprinkled with carbolic acid solution. The soldiery are encamped outside the town. The sick sailors are put on board the Entreprenaule to be examined; the cholera-patients are removed to the St. Maudrier Hospital, which is reserved for them. The crews have been placed on vessels at anchor outside the port. The Ministers of War and the Marine have given orders to the authorities of arsenals to deliver to the civil authorities all the material for camping out that they may require. MM. Brouardel and Proust arrived on Tuesday, June 24th, at Toulon, with a Ministerial decree to effect whatever measures they judge necessary for the public safety; to ordain the evacuation of entire districts, and of the city itself, if requisite. Dr. Rochaud left Paris for Toulon on Tuesday evening, also MM. Strauss and Rout, in order to continue their scientific researches. They are also commissioned to make a strict inquiry into the origin of the outbreak."

Fifty-second Annual Meeting of the British Medical Association.—This association will hold its annual meeting at Belfast, on July 29 to August 1, 1884. President, Dr. A. T. H. Waters, of Liverpool. President-Elect, Dr. James Cuming, of Belfast. The address in Medicine will be delivered by Dr. William M. Ord, of London; that in Physiology by Dr. Peter Redfern, of Belfast; that in Obstetrics by Dr. George H. Kidd, of Dublin. A number of special discussions have been arranged. Among them we note one on Albuminuria, introduced by Dr. George Johnson; one on the Plaster Jacket, introduced by Dr. L. H. Sayre; one on Extra-Uterine Fœtation, introduced by Lawson Tait; one on a New Antipyretic, introduced by Dr. Alexander Collie and by Dr. Dujardin-Beaumetz. There will be the usual annual museum, and a large number of excursions and entertainments have been planned.

Precautions Against Cholera.—The members of the summer corps of visiting physicians and the Fruit Inspectors, recently appointed by the Health Department, have received supplementary instructions in regard to their duties from Dr. E. H. Janes, the Assistant Sanitary Superintendent, in view of the possible advent of cholera in this city and its vicinity. All cases of contagious disease discovered, whether the patients are

under treatment or not, are to be immediately reported to the health bureau, giving name, age, and residence of the patient. In view of the possible advent of cholera, special attention is to be paid to shanty neighborhoods in unsewered portions of the city, where excretæ are deposited in shallow vaults or upon the surface of the ground, and where the water supply is from springs or surface wells.

The Minnesota State Medical Society.—The physicians of Minnesota need stirring up, as well as those of Louisiana, according to the *Northwestern Lancet*. The last State meeting was a success socially, but in scientific and practical work and in attendance it was a failure.

The Hospital Saturday and Sunday Funds in England amount to about a million and a quarter of dollars annually.

Death from the Administration of Bichloride of Methylene.—Another death must be scored against the comparatively little used anæsthetic, bichloride of methylene. In this case the victim was the daughter of a physician of Lancashire, England. The young lady, twenty-three years of age, was to be submitted to a slight surgical operation. The anæsthetic had been given only three minutes, and scarcely ten minims had been inhaled, when the heart suddenly ceased to beat. Respiration also stopped. All efforts at resuscitation proved unavailing. A previous examination had failed to show any signs of heart or lung disease.

The True Use of a Porous Plaster, according to a Milwaukee druggist, is "to retain the back in its proper place and let the pain crawl out through the holes."

Is Conviction for Abortion Possible in Ohio?—Under this head the *Columbus Medical Journal* cites a number of cases in which abortionists failed to be convicted, and sums up the state of affairs as follows: "1. If the abortionist does his work, his victim alone being privy to it, he is safe; for if she lives, she will not inform against him, while if she dies, her statements are entirely worthless as evidence. 2. If others are privy to the act, the prosecution must prove that the fœtus was actually *living* at the time of the operation; and this, at least after 'quickening'—and even then only on the testimony of an expert making an examination at the time—is of course impossible."

A Congress of Polish Doctors and natural philosophers took place at Posen, ending on June 4th. There were three hundred present, some having come from Egypt, India, and other distant parts for the purpose. The next congress will be held at Warsaw or Lemberg.

Louisiana Doctors Asked to Wake up.—We sincerely commend the efforts of Dr. Richard H. Day, President of the Louisiana State Medical Society, to arouse the slumbering intellects of the Louisiana doctors into greater activity. "Respected confrères," he says, in a circular letter, "when contrasted with the *esprit de corps* of the medical profession in other States, and especially with the glowing enthusiasm of the late Texas State Medical Meeting in Belton, the languor and indifference of the physicians of Louisiana in all that pertains to the unity and advancement of the medical profession must be profoundly humiliating to all true lovers of the science and the art of medicine. Brothers of the medical profession wake up! start into a new and more vigorous life! Let your medical and literary attainments and capacity for usefulness be no longer hid in slothfulness, but let us begin at once and organize the regular medical practitioners of the whole State into town, parish, and district medical societies, and bring up to our next State meeting an organization and a work and a live membership that shall thrill our very hearts with joy, and place our State Society upon a solid and sure foundation." Louisiana medicine is dead indeed if, with the incitement of such an appeal and a prospective Exposition, it does not arouse itself.

THE SIMS MEMORIAL FUND.

To the Medical Profession and Others throughout the World:

The great achievements of Dr. J. Marion Sims call for some more lasting testimonial than obituaries and eulogies. To him medical science is indebted for much brilliant and original work, especially in gynecological surgery. Those who have been benefited by his teachings and new operations, and such as have had the direct advantage of his personal skill are among the first to recognize and acknowledge this debt.

To him is due the honor of giving the first strong impulse to the study of gynecological surgery in America.

It is believed that the medical profession everywhere, the vast number of women who owe their relief from suffering directly to him, and those who realize the benefits he first made possible, will gladly unite thus to honor the man through whose original and inventive genius such blessings have been conferred upon humanity.

At the suggestion of many friends, therefore, the subjoined committee has been organized, and it is proposed that a suitable monument be erected to his memory in the city of New York.

To this end the active co-operation of the medical profession and the many other friends of Dr. Sims throughout the world is respectfully solicited. Contributions of one dollar and upward may be forwarded to the journal which has been constituted the treasury of this fund—The Medical Record, New York.

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Reports of Societies.

THE ACADEMY OF MEDICINE OF PARIS.

Stated Meeting, June 17, 1884.

M. A. GUÉRIN, PRESIDENT, IN THE CHAIR.

(Special Report for THE MEDICAL RECORD.)

AFTER the members had been called to order, the President announced that at its next meeting the Academy would resolve itself into the committee of the whole to hear the report upon the applications for corresponding membership.

M. CUSCO then exhibited a new form of

URETHRAL SOUND,

made according to his directions by M. Collin. It was partly rigid and partly elastic, and so constructed as to follow with ease the curves of the urethra.

M. LEGOUEST stated that since the last meeting of the Academy he had read an article in the *Lyon Médical*, by MM. Deperet and Boisset, on

THE MICROBE OF THE BISKRA BUTTON.

These gentlemen had also cultivated the microbe, and had injected it into a number of animals of different species, and had obtained results corresponding exactly with those recorded by M. Duclaux. In one case a slut, brought from Biskra, had the specific boil on its leg. This animal subsequently gave birth to two puppies who also had the Biskra buttons. Notwithstanding this additional testimony, M. Legouest was still somewhat skeptical as to the specific nature of the microbe found in these cases of Aleppo evil.

M. MARC SÉE desired to call the attention of the members to the excellent results obtained by

COMPRESSION IN THE TREATMENT OF HYDRARTHROSIS.

He thought it superior to the method advanced by M. Labbé at the previous meeting. He made compression by means of an ordinary Esmarch's bandage. He promised to give a more extended description of the procedure at some future meeting.

M. A. GAUTIER then read a note upon the

SYNTHESIS OF XANTHINE,

which he had succeeded in accomplishing. This was, he claimed, the first step made in the synthesis of albuminoid bodies. Xanthine differs from uric acid only in containing one atom less of oxygen.

M. COLIN, of Alfort, then read a paper upon

SEPTICÆMIA,

in which he came to the defence of the micro-organisms, claiming that it was by no means proven that the part played by them in the production of disease was so great as it was now the fashion to believe. He maintained that the experiments of M. Duclaux, described at the last meeting, were improperly conducted. The microbe, he said, is endowed with such a marvellous power of reproduction that it would be sufficient for the purposes of the experiment to inject a fraction of a drop, instead of twenty drops, as had been done.

Septicæmia, he continued, is one of those as yet imperfectly understood conditions in which the changes occurring may be due to one or several of a number of causes—microscopic organisms, septic agents, ptomaines, etc. Among certain animals, such as rabbits and birds, septicæmia could be very readily produced, while others, as dogs, oxen, and sheep, were hardly at all susceptible to the disease. The affection known as

GANGRENOUS SEPTICÆMIA

is not certainly specific in its nature. It cannot be distinguished, in animals at least, from the other forms of septicæmia. It is not proven that the virulence of the disease resides elsewhere than in the fluids of the affected organs, nor is it proven that it is transmissible by inoculation even from one animal to another of the same species. The assertions that are made concerning the carrying of the disease by instruments suppose an extreme degree of virulence which is, to say the least, very doubtful, and is not supported by experiments. The septicæmic virus, whatever it may be, is destroyed by a temperature of 212° F., and also by numerous antiseptic agents. The poison may be rendered innocuous, even after it has been deposited upon the surface of a wound, provided it be as yet unabsorbed. The difficulty, however—a difficulty which is often insuperable—is to destroy this substance once it has been absorbed and scattered through the system.

M. FOURNIER thought that the speaker was not quite just in his strictures upon M. Duclaux. There was nothing in the symptomatology of the Aleppo evil at all resembling septicæmia, and the experimenter was certainly able to recognize the latter disease, especially when he was on the lookout for it and had taken every precaution to prevent its occurrence. If the effects produced depended upon the amount of the culture fluid injected, it was strange that they should have varied so greatly according to the age of the fluid, the same number of drops being injected each time. And again, if the morbid symptoms were due to putrefaction, the results of inoculation should have become more marked in proportion to the age of the fluid. But the exact contrary obtained.

M. COLIN held to his original assertion. The presence of decomposing animal matters rendered the experiment inconclusive. If the same results were obtained by the injection of the microbes suspended in pure water, then they might justly be ascribed to the action of the micro-organisms.

M. AUGUSTE VOISIN then related the histories of five cases of

RETARDED DEVELOPMENT IN CHILDREN,

in which he had had an opportunity to study the lesions found post-mortem. Certain cerebral troubles are almost constantly associated with retarded ability to walk in young children. These are manifested by slowness in learning to talk, awkwardness in the movements of the upper extremities, especially when learning to write, incontinence of urine, malformations of the ears, etc. In every case he found a more or less complete

ATROPHY OF THE CONVOLUTIONS SURROUNDING THE FISSURE OF ROLANDO

at its upper extremity. The lesions were the same in kind and situation in each of the cases examined by him, and differed only in the degree of atrophy.

The Academy then adjourned.

TREATMENT OF GONORRHŒA BY OPEN-WIRE BOUGIES.—Dr. D. C. McVail uses a little contrivance made of three wires soldered together at one end, and bent into the shape of a sound, in the treatment of gonorrhœa. The instrument is intended to keep separate the inflamed mucous membrane of the urethra, and also to allow the discharge to drain freely away and not lie in the passage and give rise to renewed secretion. Another form has, instead of the flanged extremity, a short length of catheter-tube attached, and to that a short piece of rubber tube. The solution to be injected is introduced by a syringe, and when quite full the India-rubber tube is compressed by a spring clip, to prevent the escape of the fluid. Within from twenty to thirty minutes the injection will be almost wholly absorbed by the urethral walls, and then the clip may be detached. These instruments are well borne in the urethra, and the patient can pursue his ordinary avocations while wearing them.—*British Medical Journal.*

THE BIOLOGICAL SOCIETY OF PARIS.

Stated Meeting, June 14, 1884.

M. F. FRANCK, PRESIDENT, IN THE CHAIR.

(Special Report for THE MEDICAL RECORD.)

THE scientific work of the meeting was begun by M. ROCHEFONTAINE, who presented a communication on behalf of M. Aphanasieff upon the

TRANSFUSION OF PEPTONIZED BLOOD.

Since the chief danger in this procedure lies in the possible coagulation of the blood, and since blood containing a certain proportion of peptone loses its coagulability, the author conceived the idea of using blood thus prepared for transfusion. The experiments were made only upon animals, but the results obtained were so encouraging as to warrant the extension of the application to man when occasion should arise.

M. DASTRE remarked upon the importance of obtaining perfectly pure peptones, and also upon the accidents sometimes following the introduction of peptones into the circulation.

M. REGNARD said a few words supplementary to a previous communication that he had made concerning the

EFFECTS OF HIGH PRESSURE UPON MARINE ANIMALS.

He had determined by experiments that fish subjected to a pressure of four hundred atmospheres died from hydræmia. Some of the lower forms of marine life, such as star-fish and sea anemones, could resist a pressure of one thousand atmospheres, but died if this were exceeded.

M. VIGNAT had, at M. Regnard's suggestion, studied the changes in the tissues caused by imbibition under high pressure, and he recounted at some length these alterations as they occurred in the epithelium, tendons, nerves, muscles, and connective tissue.

M. AUBEAN spoke of the satisfactory results obtained by him in producing anæsthesia by a

MIXTURE OF AIR AND CHLOROFORM.

The experiments were made in the service of M. Péan. He had found that a mixture in the proportion of seven or eight parts of chloroform to a hundred of air gave the best results.

M. DUBOIS exhibited in this connection an

APPARATUS FOR THE INDUCTION OF ANÆSTHESIA.

It was so arranged that a mixture of air and chloroform in any desired strength could be administered.

M. LABORDE presented, in the name of M. Vigier, a communication on

ORTHOXYPHENYLSULPHUROUS ACID.

This product, which is also called by the more pronounceable name of sulpho-carbol, is destined, the speaker said, to supplant carbolic acid. It has a much less strong odor, and possesses antiseptic properties, to say the least, as great as those of carbolic acid. It enjoys the further advantage of being free from poisonous properties. It had been given to a dog weighing fifteen pounds, in the dose of two drachms per diem, with impunity.

M. REGNARD then made a few remarks upon

FERMENTATION.

At the beginning of this process there was a period of inactivity, during which the ferment, of beer, for instance, produced no effect. He had remarked that the more nearly saturated was a solution of sugar, the shorter was this period of calm. He suggested that possibly the beer ferment required some other substance to excite it to action.

After the transaction of some general business the Society adjourned.

THE MEDICAL SOCIETY OF BERLIN.

Stated Meeting, June 11, 1884.

PROFESSOR VIRCHOW, PRESIDENT, IN THE CHAIR.

(Special Report for THE MEDICAL RECORD.)

THE Society having been called to order by the President, HERR B. FRAENKEL presented a patient who had suffered for four years from

FACIAL SPASMS,

involving the left side. A varied treatment had been followed without success, and finally the patient was sent to Dr. Fraenkel on account of pain which she suffered in the left nostril. A mild periostitis of the nasal bone was found, which subsided again in a few days. While making an examination with the rhinoscope he found that the spasms were excited by any irritation of the nasal mucous membrane. Even touching this membrane with the sound was sufficient to induce the one-sided twitchings. The attempt was then made to cure the spasms by applications of the galvano-cautery to the mucous membrane of the nose. Even after the first application, the twitchings became less frequent and less violent. A complete cure was obtained after five applications, made especially to the middle meatus, from irritation of which part the spasms were most easily excited. The patient had been under observation for six weeks and had had no relapse.

As regards the changes observed in the mucous membrane, the speaker said that there was nothing to be seen but some redness and a very slight amount of swelling. Previous to the periostitis, the patient had never made any complaint of trouble in the nose which might indicate that this was the starting-point of the spasms. Several years ago the speaker had read a paper at a meeting of this Society upon

THE RELATION OF ASTHMA TO DISEASES OF THE NOSE,

in which he maintained that attacks of dyspnœa might be caused by a reflex action, excited by irritation of the nasal mucous membrane. Since that time considerable attention has been paid to the reflex neurosis of nasal origin. The case just presented showed the excellent results of a properly directed treatment. The patient had suffered for four years from an apparently intractable affection, which was nevertheless radically cured by five sittings with the galvano-cautery.

HERR E. HAHN then exhibited an

IMMENSE TUMOR OF THE NECK

removed from a man seventy-four years of age. It had been observed for the first time thirty years before, and was then the size of a walnut, and situated at the back of the neck over the sixth cervical vertebra. At first there was no pedicle, but as the tumor continued to grow it became pendulous and pediculated.

At the time of the operation the tumor weighed seventeen pounds and was attached by a pedicle, seven and a half inches broad and formed of integument, to the back near the fourth dorsal vertebra. The lower part of the growth reached down to the level of the fourth lumbar vertebra. The skin was unchanged and was movable over the tumor. The latter was as hard as bone in some places and softer in others. After removal it presented on section a bright yellow color, and was of the consistency of firm lard in some parts, and as hard as cartilage or bone in others. These hard portions were found to be concretions of lime salts. On the under side of the tumor the skin and subcutaneous cellular tissue presented the appearance of having been sown with minute fibromata.

Herr A. Baginsky presented a specimen of

THE BRAIN OF A CHILD,

which he exhibited as showing that it is possible, in certain cases at least, to determine the

LOCALIZATION OF CEREBRAL LESIONS

even in very young children. The little patient was but nine months old when the first symptoms appeared. The pupil of the right eye was dilated, and there was ptosis on the same side. The left eye was rotated outward, and at the same time its axis was directed somewhat downward. There was also complete paralysis of the left facial nerve. The symptoms argued against trouble at the base of the brain; for any lesion in this situation so extensive as to involve the motor oculi and facial nerves must have given rise to symptoms of meningitis, and these were completely absent. Being thus forced to the diagnosis of a central lesion, the location could be settled with tolerable certainty in the anterior portion of the pons, where the centres for the motor nerves of the eye are to be found. And since the ptosis and paralysis of the sphincter iridis were upon the right side, the lesion was probably on that side also. Further, since syphilis could be excluded, it seemed most probable that the lesion was tubercular in its character. Later there were twitchings in the left arm and leg, an inclination of the head backward and to the left, and a general curve of the body to the left side—phenomena indicative of a lesion in the right crus cerebri, as well as in the anterior portion of the pons varolii. The disease progressed steadily until the death of the child. The autopsy showed a considerable amount of fluid within the cranium, but not a trace of meningitis or miliary tuberculosis. In the right crus was found a collection of cheesy matter extending forward to the optic thalamus, and backward into and involving the anterior third of the pons. Almost the entire portion of the crus had undergone this caseous degeneration. There was a reddish brown zone surrounding the softened portion of the brain. Examination failed to show the presence of tubercle bacilli.

Herr P. Güterbock then read a paper upon

HEREDITARY SYPHILITIC JOINT DISEASES.

The author had published an article on this subject in the *Archiv für Klinische Chirurgie* for 1878, in which he had summarized all that was then known about syphilitic joint affections in young children. He now desired to supplement that article with the conclusions drawn from a further experience with the disease in question. He opposed the views of several authors, chiefly English, that syphilitic joint lesions in children were of common occurrence. He had met with but one case of hereditary syphilis out of every three hundred patients under five years of age. It is important to distinguish this form of joint disease, since the prognosis, with proper treatment, is very favorable. But, on the other hand, the chances of recovery in tubercular arthritis are very small. The author gave in detail the histories of two of his cases, one of which he treated by corrosive sublimate baths; the other by the internal administration of potassium iodide. Any operative interference in this class of diseases is usually productive of untoward results. In conclusion, he insisted upon the necessity of an early diagnosis and the prompt institution of appropriate treatment.

The Society then adjourned.

A Simple Contrivance for Making Camphor Water.—Dr. James Dunworthie, of Dobb's Ferry, sends us a bit of glass tubing in which is pushed a piece of gum camphor. This can be thrown in a bottle of water and will sink to the bottom. The glass holds the camphor in the water.

THE ROYAL IMPERIAL SOCIETY OF PHYSICIANS IN VIENNA.

Stated Meeting, June 6, 1884.

Professor v. Arlt, President, in the Chair.

(Special Report for The Medical Record.)

The paper of the evening was read by Professor Billroth. and was chiefly a collection of statistics bearing upon the operation of

EXTIRPATION OF THE KIDNEY.

This operation was performed for the first time by Simon, fifteen years ago. Since then, according to the tables prepared by Dr. Schustler, there have been 132 recorded cases of extirpation of the kidney. Of these cases, 70 recovered and 62 died, a mortality of 47 per cent. These figures were, however, the speaker maintained, misleading, if used as a basis for the prognosis of individual cases, since the success or failure of the operation in each case depended so much upon circumstances.

He then proceeded to dissect these statistics, dividing the cases into classes according to the indications for operation. In every instance in which the extirpation of the organ was, so to speak, unpremeditated—that is, when in operating for the removal of an abdominal tumor—it was found necessary, on account of adhesions, to remove the kidney as well, a fatal result was recorded.

Healthy kidneys had been removed in answer to three indications: 1. In three cases of abdominal wounds involving the kidney, the injured organ had been removed. 2. In nine cases of extirpation, on account of fistulæ of the ureter, six had died. 3. Fourteen operations for the removal of a wandering kidney have been recorded, six of which resulted fatally. The author hoped that some method might yet be devised by which the kidney could be fixed, thus avoiding the high mortality attending the operation.

The extirpation of a diseased kidney has been undertaken for suppuration (pyonephrosis, perinephritis) twenty-two times with successful result; on account of a tumor, thirty-three times with twenty deaths; for hydronephrosis, nine times with six recoveries.

The author then detailed the various steps in the two operations for extirpation of the kidney, giving his preference for the lumbar incision over laparotomy.

Dr. Jurié had removed a floating kidney successfully, after having made two futile attempts to fix it. The patient recovered, but hanged herself subsequently, being led thereto by some family troubles.

Dr. Bergmeister then exhibited a patient with

CONGENITAL DERMOID TUMORS OF THE CORNEA.

The two tumors were of a reddish yellow color, and were placed symmetrically on the outer side of the cornea of each eye, but were of unequal size. The same patient had also a

CONGENITAL CICATRIX OF THE FACE,

extending from the left corner of the mouth across the cheek to the ear. The cicatrix was somewhat sunken and lightly stretched, and presented at its outer extremity a little integumentary tumor. The latter had been cut off. This cicatrix, Dr. Bergmeister thought, was due to amniotic adhesions to the skin. There was one more point of interest about the case, and that was an

ASYMMETRY OF THE FACE.

The whole left side of the face was less developed than the right, and the left corner of the mouth was elevated, probably from contraction of the cicatrix.

Finally, Professor Rosenthal presented a patient with

BULBAR PARALYSIS,

and related his history at length. The peculiarity of the case consisted in the fact that the sclerotic atrophy o

the nuclei began in the upper half of the calamus scriptorius, and then extended gradually downward.

Professor Benedikt made some further remarks on

CRANIOMETRY,

and exhibited his instruments, and detailed the various steps of the methods of measurement used by him.

At the conclusion of this demonstration the Society adjourned.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE NORTHWEST LONDON HOSPITAL—DR. JOSEPH ROGERS—TYPHOID IN SWITZERLAND—DR. COBBOLD ON TRICHINOSIS AT THE HEALTH EXHIBITION.

London, July 28, 1884.

An event which may be fraught with grave consequences to the management of hospitals has just occurred and has excited no little attention. The scene of action is at one of the younger hospitals—the Northwest London Hospital. The committee of this institution have thought fit to dismiss one of the surgeons without assigning any reason. The staff have resented this treatment by resigning almost *en masse*. They have at the same time forwarded a written protest. It appears that the management is vested in three ladies, one of whom founded the hospital. Of the other two one is also acting as matron. The recent appointments to the acting staff were made by these ladies without consulting the medical officers of the hospital, and the recent dismissal of one of the surgeons has been effected in the same manner. There is a charming frankness in the way in which it is generally admitted that these three ladies have really appointed the staff. Such oligarchical arrangements are not unknown in other hospitals than that in point, but are not usually so openly acknowledged. Frequently, though, appointments to smaller hospitals are really made by one individual—often the founder—who quietly tells the committee what to do.

On Tuesday last a testimonial was presented to Dr. Joseph Rogers, the well-known Poor-law medical officer and sanitary reformer. The presentation took the form of a piece of plate and a cheque for £150, and the several speakers referred to Dr. Joseph Rogers' well-known services to sanitary science and reform.

Typhoid fever is still prevalent in Switzerland, especially around Geneva and Zurich. At this season of the year, when so many tourists are going to Switzerland, the health of that country cannot but be of interest to British practitioners, who, but for the prevalence of typhoid, might now be sending their patients there. The Swiss authorities have endeavored to make as light as possible of the matter, but in Zurich and Geneva twenty-six deaths from typhoid occurred during the four weeks ending June 14th.

Perhaps the best lecture as yet delivered at the Health Exhibition, has been that just given by Dr. Cobbold on Parasites. A large portion of the lecture was devoted to the subject of trichina. The life-history of the parasite was described and epidemics of trichinosis referred to. Dr. Cobbold said that the only genuine instance of trichinosis diagnosed in England, was that in Cumberland, described by Dr. Dickinson in the Cantor Lectures. Several persons were affected in this outbreak. All other alleged outbreaks were misinterpretations of the facts observed. A great number of little worms living in various animals had been described as trichinæ by persons not familiar with parasites, and to this was due the periodical "scares" got up by newspapers. As to these "scares," Dr. Cobbold remarked that ignorant writers in the daily papers seemed to take pleasure in creating them. The recent attempt to get up a "mackerel-scare" fell rather flat. In regard to preventive measures, the lecturer said he thought the question as to the temperature required to kill the trichinæ had been set at rest by the labors of Perroncito, who found that cooking meat at 120° F. was sufficient to destroy the parasites. M. Colin had shown that two or three weeks salting was sufficient to kill them in the superficial parts of the flesh salted, but the deeper parts might not be reached for a couple of months.

THE FEEDING OF INFANTS, AND HOW TO PREPARE PEPTONIZED MILK.

To the Editor of The Medical Record.

Sir: Since the publication of your editorial on the feeding of infants, I am receiving letters from physicians asking how to peptonize milk. I am not surprised at the interest awakened in the subject at this season, when so many infants are sick from improper diet. Most inquirers live at a distance. New York physicians are, I think, with few exceptions, familiar with the process. The advice that I give to my families as regards the preparation of milk is as follows: Scald the milk when it arrives in the morning, and then place it on ice. Do not peptonize more than half a pint to one pint at a time; and what the infant does not take immediately afterward, should be kept upon ice and surrounded by ice for the second feeding.

The peptonizing process is as follows: Mix a powder consisting of five grammes of Fairchild's extractum pancreatis, and ten grains of sodium bicarbonate in one gill of tepid water. Add this gill to one pint of tepid milk, and place it in a bowl in a pan of water maintained at a temperature of 100° or a little over. In one hour or less time, the process is completed. Too much peptonizing renders the milk bitter. Some milk is sufficiently digested in thirty or forty minutes, and the nurse who prepares it should occasionally taste it after the first twenty minutes, and remove it from the pan of warm water before the hour has expired. If the least bitterness be noticed, the pancreatic ferments are destroyed by boiling, and rendered inactive; but not destroyed by a temperature near that of ice. We do not wish to destroy the ferments but wish to have them active in the stomach of the infant. Hence, the direction to place the peptonized milk on ice, instead of boiling it. The object is to prepare for infants a food which will resemble as closely as possible human milk in nutritive properties and digestibility, and peptonized cow's milk appears to be the nearest approach to it yet obtained.

The great importance of the subject induces me to send to you for publicat on the following private letter from Professor Leeds, as perhaps it may aid in saving life. It is known to most of your readers that Professor Leeds has made more analyses of infants' foods than any other chemist, and that no one is better able to give advice in dietetics from a chemical standpoint than he. The letter relates to his remarks on infant feeding at the meeting of the County Medical Association on June 16, 1884.

"Sir: The formulæ which I ventured to suggest for the preparation of humanized cow's milk was as follows: 1 gill of cow's milk, fresh and unskimmed, 1 gill of water, 2 tablespoonfuls of rich cream, 200 grains of milk sugar, 1¼ grams of extractum pancreatis, 4 grammes of sodium bicarbonate. Put this in a nursing-bottle, place the bottle in water made so warm that the whole hand cannot be held in it without pain longer than one minute. Keep the milk at this temperature exactly twenty minutes. The milk should be prepared just before using. . . . Yours truly,

"Albert R. Leeds."

The summer season, when infantile diarrhœa is so prevalent, affords the opportunity for testing peptonized milk, and it is my opinion, from a considerable number

of observations, that it is the safest and best substitute for breast milk. Moreover, it appears to be good food for children in the second and third year, who are sick or have feeble digestion. The profession are indebted to the Messrs. Fairchild for a cheap and reliable extractum pancreatis. Yours, J. Lewis Smith, M.D.

New York, July 11, 1884.

CONCERNING THE CONDUCT OF THE EXAMINERS OF THE ROYAL COLLEGE OF SURGEONS, ENGLAND.

To the Editor of The Medical Record.

Sir: The statements contained in your London correspondent's letter of May 24th, respecting the examiners of the Royal College of Surgeons, are incredible. This insinuation that many of them are not gentlemen is grossly unfair, but is a little vague, no one having yet hit upon a quite satisfactory definition of that honorable title. But it is certain that all the examiners have been and are men of good professional standing and attainments. It is quite incredible that a candidate could be "dragged around the room by his coat" when we remember that all the examiners and examinees are in one, not very large, room, containing four tables and as many sets of examiners. As to the other story of the examiner who swore at the candidate and kicked up his heels, that is equally unlikely. I may say that complaints have often been made of the examinations at the College and even of the behavior of examiners, but this has never referred to anything but harshness of manner or sarcasm, which certainly are not desirable in an examiner. Your correspondent's tales are merely high-flavored articles for exportation and would only be laughed at here.

Yours faithfully, Robert Saundby.

7 Newhall Street, Birmingham, Eng., June 23, 1884.

THE TREATMENT OF TAPEWORM—PELLETIERINE.

To the Editor of The Medical Record.

Sir: Having noticed several several inquiries in the columns of your journal recently in regard to the most successful method of disposing of tapeworm, and having treated a number of cases with the remedy which heads this article, I have concluded to give the profession the benefit of my experience.

Few practitioners of large experience have escaped the annoyances spoken of by your correspondents. In a practice extending over twenty-four years I have treated about twenty cases, some of which have been very perplexing, especially the *tænia saginati*, or beef-worm. Almost any of the remedies ordinarily used will destroy the *tænia solium* or pork-worm. The popular idea that the former, or *unarmed* variety, is the easiest to destroy is erroneous. I have succeeded with almost all the remedies which I have tried in destroying the solium, but only occasionally have I been successful in expelling the saginati entire with anything except the pelletierine. The prevalent opinion that the solium is the more prevalent of the two worms is also a mistake as I have met about three of the former to one of the latter.

Case I.—On July 2, 1883, I administered pelletierine to a vigorous healthy male patient, forty-five years of age. He had been afflicted with the worm for fifteen months. He had taken June 25, 1882, fluid extract kamela, and passed about twenty-five feet of the worm, but no head. In about three months the ripe segments began to pass again. At this time he took fluid extract male-fern with a result similar to the kamela. In December following, he took kousso with the same result, passing about twenty feet of the parasite. In March following, a mixture of male-fern and kamela was given the patient with the usual result. On July 1, 1883, twenty grains of Merk's tannate of pelletierine was given. No part of the worm was dislodged, but upon the following day, at 5 o'clock A.M., one ounce of Tanret's pelletierine was administered, followed by four ounces of infusion of senna, and at 7 A.M. the parasite, unbroken, was passed, to the great relief of the patient.

Case II.—Wife of Case I., contracted the disease at the same time, both being afflicted with the tænia saginati. Patient had similar treatment with no better results. Pelletierine was administered July 4th, at 3 o'clock A.M., followed in one hour with the infusion of senna. Parasite passed entire at 6 o'clock A.M., making the entire family happy.

Case III.—Was that of a German, aged fifty-seven. Had been afflicted five years. Had taken medicine several times without success. Was unable to ascertain what remedies had been used. Two years before consulting me had an attack of typhoid fever, which lasted six weeks, during which time several feet of the worm passed. May 21, 1883, gave him fluid extract kamela, after the usual preparations. Passed about fifteen feet of the parasite, but no head. Three months afterward the patient returned for further treatment. Gave him pelletierine, but a portion of it was lost by vomiting, repeated the dose in three hours, followed by one ounce of compound tincture of jalap. Worm passed unbroken, in one hour after the last dose.

Case IV.—Male, aged thirty-four; carpenter by occupation; had been passing proglottides about a month. Had taken medicine from a physician which purged him violently, but with no result. Gave him pelletierine after the usual preliminary treatment, following it with compound tincture of jalap, which did not move bowels for nearly six hours. The parasite passed unbroken notwithstanding the delay.

Case V.—Was a young man, aged twenty-one; student, who had been afflicted over two years, but had taken no treatment. Gave medicine in the usual way, with a perfect success.

Case VI.—Was a young lady, aged fifteen. Had been afflicted two years. Had taken kamela, kousso, and male-fern without success, passing several feet of the worm at each administration, but no head. I gave her the pelletierine in the usual way, with the same success as in the other cases.

All the preceding cases were of the tænia saginati. Perhaps one reason why I have met the saginati oftener than the solium is because I practise in a blue-grass, beef-producing region, and where a majority of the inhabitants eat their beef underdone.

No symptoms were present in any of my cases which would indicate the presence of tapeworm, except the passing of the ripe segments. The patients had none of the symptoms laid down in the books. They all enjoyed vigorous health, and complained of nothing save the annoyance caused by passing the proglottides, which was liable to occur at any time without warning.

Pelletierine is the alkaloid of the pomegranate bark, and is manufactured by Charles Tanret, 64 Rue de Rampart, Paris, France. Tanret is a student of Pelletier, who first succeeded in extracting the alkaloids from the cinchona bark. A desire to honor the name of his illustrious preceptor is sufficient cause for the name of the alkaloid.

It is a pleasant, safe, and speedy remedy. When stirred in a glass of sweetened water it is as pleasant to the taste as a glass of lemonade. It is followed in a few minutes by a transient dizziness or vertigo, which in some of my cases was quite severe. It should be followed in half or three-quarters of an hour by a brisk cathartic—compound tincture of jalap or infusion of senna. A neighboring practitioner gave the cathartic before administering the remedy, and the worm was expelled in less than an hour after taking the pelletierine, but it was a tænia solium. G. C. Smythe, M.D.

Greencastle, Ind., June 24, 1884.

To the Editor of The Medical Record.

Sir: In the Medical Record of June 21st, Dr. Thomas Wilde offers a prescription for the removal of tape-worm, which has so great a similarity to a mode of treatment used by myself for several years with such unvarying success that I am induced to offer it to you as an appendix to Dr. Wilde's article. It has, however, this advantage, that the time required to produce its effect is only about twelve hours, instead of being drawn out for a week. The formula, I believe, originated with Dr. A. J. Shafish, of Washington, D. C., and was published over the signature of Dr. Trumbull in the *Medical and Surgical Reporter*. My attention was called to it by Mr. Byron Stedman, a most excellent pharmacist of this city, who obtained it from the records of the Brooklyn Dispensary, with which institution he was at one time connected, who prepares it with more than ordinary skill. During the past year I have treated eleven cases, in each and every case the entire worm has been expelled at once. In the majority of the cases the head has been discovered, while in those in which it was not found the tenuity of the cephalic extremity left no doubt in my mind but that the head had passed away and been lost among the fecal discharges. At any rate, the non-return of the parasite in those cases in which the head was not found proves the destruction of the unwelcome tenant. I have used it in delicate women and children, and beyond a temporary prostration have witnessed no bad effects. My usual course is to ask the patient when he can conveniently attend to the removal, and setting a day, making no change in his diet whatever, give at bed-time half an ounce of Rochelle salts. The following morning at about ten o'clock—all food having been omitted—I give the following, prepared as I shall state:

℞. Cort. rad. pomegranate..... ℥ ss.
Pumpkin seeds..... ℥ j.
Kernel of ergot..... ℥ ss.
Ethereal ext. male-fern..... f℥ j.
Gum arabic..... ℥ ij.
Croton oil..... gtt. ij.
Aquæ..... f℥ vj.
M.

In about two hours the worm is expelled. The success of this mode has been unvarying. The foregoing draught is intensely bitter, and tends to nauseate, but by directing the patient to drink it quickly and lie down immediately, the tendency to vomit is arrested. After the worm is discharged, I order a strong milk-punch, and if the bowels seem irritable or are painful, a dose of opium or morphia removes the trouble. In a day or two an iron tonic is given.

In the preparation of the anthelmintic bruise the bark, pumpkin seeds, and ergot in a mortar to moderately fine powder, heat for half an hour in the water in a water-bath, strain, and on the residuum pour enough hot water and strain with pressure to bring the quantity of strained fluid up to six ounces. Put the oil into the gum arabic, add the male-fern—emulsionize the whole. With care a fine emulsion is produced.

I am looking for a remedy against "pin-worms" which shall prove as successful and prompt as is the one I have given you against the tænia. H. Lyle Smith, M.D.

Hudson, N. Y., June 23, 1884.

To the Editor of The Medical Record.

Sir: In response to a request of a subscriber for the treatment of tapeworm I will say that I once saw in an old number of *Braithwaite's Retrospect* an item advising the use of creasote in persistent cases, since that I have used that agent after all others had failed, with invariably successful results. I have given one drop in an emulsion of acacia three times daily for two days, then increased to two drops three times daily for two days, then to three drops for two or three days, when the head has universally come away. Finley Ellingwood, M.D.

Manteno, Ill., June 17, 1884.

To the Editor of The Medical Record.

Sir: For the benefit of your subscriber who seeks information upon the best treatment of tapeworm, I would suggest to him the use of Tanret's pelletierine. I have used the remedy in six cases, five of them being successful.

Fougera & Co., New York City, are the agents for Tanret's pelletierine in this country.

Yours, very respectfully, H. Wilfert, M.D.

Cincinnati, June 16, 1884.

To the Editor of The Medical Record.

Sir: In reply to a request of one of your subscribers (Medical Record, p. 682, June 14, 1884), and for the information of those interested in the subject, a mode of treatment for tapeworm is given below which has proved in my hands to be better than any other, and has have given most satisfactory results. A reliable remedy for the relief of tapeworm is a valuable addition to the therapeutical knowledge of every general practitioner, for whatever the opinion of medical minds may be about the severity of disturbances caused directly by the presence of parasites in the alimentary canal, it cannot be disputed that laymen attribute great importance to their presence. I have seen a large number of cases of tapeworm, and have given a fair trial to the variety of remedies which are generally administered in such cases, including the infusion of pomegranate root, as recommended by Dr. Thomas Wilde (Medical Record, May 31, 1884). The principal objection to the use of the latter is its unpleasant taste and the large amount of fluid which has to be taken; in a number of cases where the pomegranate infusion had been used it produced violent emesis, and some patients were unable to retain it, even in small doses. In four cases out of fifteen the entire worm had been expelled and the head found, but almost all the patients complained of the harsh treatment.

The treatment which has been followed by the best results is a simple one, any reliable apothecary can prepare the prescription, and patients will take the medicine without difficulty. Although it is not essential to have the patient fast for any length of time, still it is advisable to allow only moderately of food during the afternoon and evening of the first day, and to abstain from food entirely while taking the medicine in the morning from 8 to 10 A.M. The following are the prescriptions to be given as directed:

℞. Hydr. chlor. mite..... gr. x.
Pulv. jalapæ..... ℥ ss.
Pulv. aromat..... gr. x.
M. Ft. pulv. No. 2.

S.—Take one powder at 4 P.M. and the other one at bed-time.

℞. Ext. male-fern ether..... ℥ iij.
Ext. sennæ fld..... ℥ iij.
Ext. hyoscyami fld.,
Tr. menth. pip.....aā ℥ ss.
M. Ft. mist.

S.—Take one teaspoonful (good sized) every half hour—to commence at 8 A.M. the day after the powders have been taken.

The use of hydr. chlor. mite as a preparatory remedy has been suggested by Dr. R. Kuchenmeister in Dresden.

Paul H. Kretschmar, M.D.

Brooklyn, N. Y.

Nux Vomica as a Galactagogue. — Dr. Posada Arango speaks very highly of the good effect of nux vomica as a stimulant to the secretion of milk. He gives ten drops of the tincture three times a day, and explains its galactagogue properties by its action on the mammary gland, exciting it to secretion, and by its stimulating action on the stomach facilitating digestion. He recommends strychnia in recent cases of complete suppression of the secretion.—*London Medical Record.*

THE QUESTION OF THE FLORIDA CLIMATE.

To the Editor of The Medical Record.

Sir: On April 26th last you published in The Record a letter from Dr. Boyland, of Baltimore, upon "Florida as a Health Resort." As some of his statements were so opposite to my observations, I felt like rushing into print and criticism of the Doctor's paper. But as it is now over two years since I was last in Florida, and not knowing what wonderful changes might have occurred there meantime, I immediately wrote my friend Dr. Phillips, of Gainesville, Fla., for a few statistics. Unavoidable accident delayed his answer and consequently this of mine. His letter is now before me, but as time cures almost every curable thing, my first impulse to criticise shall be modified and confined to a few items relative to the respective advantages as sanitariums of Gainesville and Cedar Key (not "Keys"). Dr. Boyland disparages Gainesville by complaining of its level surface and defective drainage, also on account of the vast number of consumptives whom he seems to believe do congregate there in shoals and nations, and the almost daily deaths among whom (as he says) exert a "deleterious effect upon other and non-phthisical cases." Bad! bad enough, if true, but Dr. Phillips says (and I will vouch for his truthfulness) "there were not to exceed six cases of deaths among the visitors at Gainesville from November, 1883, to May, 1884."

How about "the almost daily deaths" reported by Dr. Boyland? As to the level surface and defective drainage, I can speak for myself. I say the ground is rolling, that most of the streams are situated in deep ravines, and the currents lively. I say further that Gainesville is drained by a natural sink, about two miles south of the town. The streams of the surrounding districts pour down the great throat of this inlet to the vast cavernous passage below the limestone stratum; where the water again comes to the surface no one knows, but from the direction of the line of depressions, marking the course of the subterranean stream, it probably runs north and directly under Gainesville, for about two miles north of the town is one of these depressions (and the largest of them all) where one can go down dry-shod from the pine-covered sand above, over one hundred feet to the coral rock bed or backbone of the State. So much for the level surface and want of drainage of Gainesville.

Now, as the Doctor recommends Cedar Key to those who desire a seaboard resort, I must conjecture that his acquaintance with that city is secondary, also that his informant (if informant he had) does not eliminate truth freely.

The drainage of Cedar Key is largely into the wells, the air is redolent of bilge-water and putrid things. With the periodic winds, quotidian fogs, perennial fleas, nocturnal mosquitoes, with nothing to please the eye, everything to offend the nose, and not one drop of clean well-water to cool the mouth, I would recommend Cedar Key to no one, except a scavenger, and him one of about the nine hundred and ninety-ninth "stage." As a sanitarium I prefer Gainesville to any other town in Florida known to me; Cedar Key I would place last in the fullest catalogue.

Wm. B. Bradner, M.D.

Warwick, N. Y., May 26, 1884.

SHALL OFFICERS OF THE ARMY ENGAGE IN PRIVATE PRACTICE.

To the Editor of The Medical Record.

Sir: Some time ago I wrote to the Surgeon-General of the Army for information respecting some points of practical importance to physicians, and in reply received word that not only was there no rule or regulation preventing post surgeons from engaging in general practice, but that it was his custom to advise post surgeons to get all the practice they could outside, *so that they might not grow rusty*.

As this seems to me anything but a fair and proper course to pursue; and as an earnest protest on my part has received absolutely no notice whatsoever, I wish through your columns to inform those physicians who are so unfortunate as to live where army surgeons are stationed, of just what they may reasonably expect. If there is no impropriety, not to use a harsher term, in attempting to secure outside practice while drawing full and presumably adequate pay from the Government, then I must confess myself so mentally obtuse as not to perceive it.

In the first place it is *unfair* competition. The army surgeon is backed by an assured salary. The office he occupies and the horse and buggy he uses are in part paid for by the very physicians against whom he comes in competition. To the military medical mind this may seem fair and honorable. To the civilian, however, it certainly does not.

In the second place, the fear *that the army surgeons may grow rusty* affords no manner of excuse for pirating outside of the post. If there is not enough for the surgeons in the army to do, then cut down the number; or else give them more soldiers to look after. It is the Government's fault that there are too many surgeons for the number of soldiers. Let the Government remedy that and not advise their subordinates to encroach on ground not legitimately their own. Have civil practitioners no rights as opposed to salaried Government officers? Were there a dearth of local physicians an army surgeon might be excused for answering calls in emergencies. Such conditions, however, do not obtain here in the East.

I hesitate to believe that the majority of army surgeons would follow any such advice as has emanated from the Surgeon-General, having been informed by gentlemen of the army that practising outside of posts has not been customary in the past, except in such places where physicians were few and far between, as in the far West; and moreover such practice has always been regarded as not strictly fair and honorable, except under the exceptional conditions just mentioned.

Very truly yours,

John G. Stanton, M.D.

New London, Conn.,
July 8, 1884.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from July 6 to July 12, 1884.

Perin, Glover. To be Assistant Surgeon-General, with rank of Colonel, promotion to date from July 2, 1884.

Smith, Andrew K. To be Surgeon, with rank of Lieutenant-Colonel, promotion to date from July 2, 1884.

Middleton, Passmore. To be Surgeon, with rank of Major, promotion to date from July 2, 1884.

Clements, B. A., Major and Surgeon. Also directed to relieve Surgeon J. P. Wright of his duties as Acting Medical Director, Department of the Missouri. S. O. 138, par. 1, Headquarters Department of Missouri, July 8, 1884.

Promotions.—To be Assistant Surgeons, with the rank of Captain after five years' service, in accordance with the Act of Congress of June 23, 1874. Assistant Surgeons John J. Kane, John M. Banister, Aaron H. Appel, Charles Richard, W. Fitzhugh Carter, June 3, 1884.

Birmingham, H. P., First Lieutenant and Assistant Surgeon. From Fort Bayard, N. M., to Fort Bliss, Texas. S. O. 137, par. 3, Headquarters Department of the Missouri, July 3, 1884.

Official List of Changes in the Medical Corps of the U. S. Navy, during the week ending July 12, 1884.

LUMSDEN, G. P., Passed Assistant Surgeon. Ordered to U. S. S. Wyandotte.

PERSONS, R. C., Passed Assistant Surgeon. Detached from U. S. S. Wyandotte and placed on waiting orders.

Official List of Changes of Stations and Duties of Medical Officers of the U. S. Marine Hospital Service, April 1 to June 30, 1884.

BAILHACHE, P. H., Surgeon. Detailed as chairman of Board to examine candidate for appointment into the Revenue Marine Service, May 17, 1884.

VANSANT, JOHN, Surgeon. To proceed to Empire City, Oregon, as Inspector, April 2, 1884.

HUTTON, W. H. H., Surgeon. Granted leave of absence for twenty-five days, May 14 and June 9, 1884.

MILLER, T. W., Surgeon. Granted leave of absence to attend the meeting of the American Medical Association, May 1. To proceed to Pittsburg, Pa., Ashtabula, O., Buffalo, N. Y., and Detroit, Mich., as Inspector, May 10, 1884.

WYMAN, WALTER, Surgeon. To proceed to Crisfield, Md., as Inspector, April 11, 1884. Detailed as president of Board for physical examination of candidates for appointment as cadets in the Revenue Marine Service, May 20, 1884. To examine cadet-graduates Revenue Marine Service as to physical qualifications, May 31, 1884. Detailed as member of Commission to inspect United States buildings at Quarantine Station on the Delaware River, June 16, 1884. Detailed to represent the Marine Hospital Service as Delegate to the American Medical Association, April 17, 1884.

AUSTIN, H. W., Surgeon. Granted leave of absence to attend the meeting of the American Medical Asssociation, May 2, 1884.

GASSAWAY, J. M., Surgeon. When relieved by Passed Assistant Surgeon Mead, to proceed to Portland, Me., and assume charge of the Service, April 16, 1884. Granted leave of absence for thirty days, May 28, 1884.

STONER, G. W., Passed Assistant Surgeon. When relieved by Surgeon Gassaway, to proceed to Cairo, Ill., and assume charge of the Service, April 16, 1884. When relieved by Surgeon Gassaway, to report in person to the Surgeon-General, June 20, 1884.

IRWIN, FAIRFAX, Passed Assistant Surgeon. Granted leave of absence for twenty-one days, June 19, 1884.

MEAD, F. W., Passed Assistant Surgeon. When relieved by Assistant Surgeon Devan, to proceed to Philadelphia, Pa., and assume charge of the Service, April 16, 1884. Detailed as recorder of Board for physical examination of candidates for appointment as cadets in the Revenue Marine Service, May 20, 1884.

CARTER, H. R., Passed Assistant Surgeon. To inspect unserviceable property at the San Francisco Hospital, May 24, 1884.

WHEELER, W. A., Passed Assistant Surgeon. To inspect unserviceable property at the Chicago Hospital, May 24, 1884.

BENSON, J. A., Passed Assistant Surgeon. Granted leave of absence for thirty days, April 14, 1884. When relieved by Passed Assistant Surgeon Stoner, to report to him for temporary duty, May 19, 1884.

BANKS, C. E., Passed Assistant Surgeon. Detailed as member of Board to examine physically candidate for appointment into the Revenue Marine Service, May 17, 1884. To inspect unserviceable property at Baltimore, Md., New York, N. Y., and Boston, Mass., May 26 and June 2, 1884.

BENNETT, P. H., Assistant Surgeon. Granted leave of absence for twenty days, June 28, 1884.

DEVAN, S. C., Assistant Surgeon. To proceed to Port Townsend, W. T., relieve Passed Assistant Surgeon Mead, and assume charge of the Service, April 14, 1884.

URQUHART, F. M., Assistant Surgeon. Granted leave of absence for thirty days, May 22, 1884.

YEMANS, H. W., Assistant Surgeon. To report to Captain M. A. Healey for duty as Medical Officer during cruise of Revenue Cutter Corwin, April 16, 1884.

GLENNAN, A. H., Assistant Surgeon. To proceed to Mobile, Ala., for temporary duty during sickness of Passed Assistant Surgeon Goldsborough, June 17, 1884.

BROOKS, STEPHEN D., M.D., Massachusetts, having passed the examination required by the Regulations, was appointed an Assistant Surgeon by the Secretary of the Treasury, May 15, 1884. (Dr. Brooks had previously served as an Acting Assistant Surgeon from March, 1883, to May, 1884).

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending July 12, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
July 5, 1884.....	3	6	27	3	156	41	0	0
July 12, 1884.....	2	8	55	4	187	31	0	0
Deaths.								
July 5, 1884.....	0	2	12	3	30	20	0	0
July 12, 1884.....	0	3	14	3	27	18	0	0

A CASE OF SUCCESSFUL REPLANTATION OF A TOOTH is recorded in the *Weekly Medical Review* by Dr. A. B. Barnette. He writes that he extracted the tooth, cleaned the cavity, washed the tooth well and put it back. Inside of a month it was firm and he had it filled.

THE CHOLERA GERM AND THE LOCAL AND TIME FACTORS.—Professor von Pettenkofer, of Munich, has written an article in the *Neuesten Nachrichten* in which he shows that a bacillus or germ is not alone sufficient to explain the causation and transmission of cholera. There must be certain conditions of season and soil which favor its development. These he calls the "local and time factors."

F. HEBRA'S PRESCRIPTION FOR BALDNESS.—℞. Tinct. macis, 5 grammes; olei dulcis, 50 grammes. M.

YVON'S PARALDEHYDE ELIXIR FOR INSOMNIA.—℞. Paraldehyde, 10 grammes; alcohol at 90°, 40 grammes; tinct. vanillæ, 2 grammes; aquæ, 30 grammes; syr. simpl., 60 grammes. M. Dose ʒ j. to ʒ ij.

REMOVAL OF A WANDERING SPLEEN.—According to an account published in the *American Medical Journal* of July, 1884, Dr. E. Younkin, of St. Louis, has successfully removed a spleen, which had committed the offence of being dislocated and causing distressing pains. The organ was, before removal, two or three times larger than normal. After removal its parenchyma was found to be healthy. The patient was a married woman, aged thirty-two, of slight build, and was in tolerably good health.

THE LAST FORM OF MERCURY recommended for medicinal use is the hydrargyrum tannicum oxydulatum, which has been prepared in the laboratory of Professor Ludwig, of Vienna. It is a greenish, tasteless powder. Dose, 0.1 gramme.

The Medical Record

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Original Articles.

SOME REMARKS ON AFFECTIONS OF THE HEART.

BY J. MILNER FOTHERGILL, M.D. EDIN., HON. M.D. RUSH MED. COLL., ILL.

ASSOCIATE FELLOW OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA, PHYSICIAN TO THE CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST.

IV.

CARDIAC NEUROSES.

WHEN a patient presents himself, and still more herself, before a doctor at first-hand, complaining of the heart, it is all Buckingham Palace to a sentry-box the case is one of a cardiac neurosis, and not organic disease. It is some outcome of the latter, as shortness of breath, for instance, which leads the subject to the doctor's office when the case is one of organic disease. Then, when the patient complains of pain at or near the heart, remember disease of the heart does not produce pain. Angina pectoris is the only pain linked with disease of the heart or arteries. You can at once say, "Pain has nothing to do with heart disease." The patient may have some heart trouble as a coincident matter; but, if so, this has no relation to the pain complained of. But however clear you may be about the matter yourself, you will find it no easy matter to convince the patient. Having laid down these two broad rules, the different cardiac neuroses may now be sketched in outline.

First comes palpitation. Palpitation linked with effort is usually muscular adynamy, and points to the heart as a muscle. Palpitation coming on at other times than when effort is made points either to vaso-motor disturbance (gouty), or is neurosal. When a lady is wakened up in the night with her heart beating violently, and yet now and again halts, as if it was going to stop, she is naturally very much alarmed. And yet usually she need not be alarmed. Such an experience is common with women at the menopause; and there may or may not be an asthenic condition of the heart-wall present. There may be no gout in the case; often there is. Very often in such cases there is a weak state of the heart-wall which requires attending to by appropriate measures. In some cases the attacks are due to some derangement in the innervation of the heart, connected with the accelerator fibres of the vagus. A start will cause palpitation in many persons, and especially females liable thereto. The sexual act will not uncommonly set up violent palpitation, or continence may bring on paroxysms of palpitation, relieved by intercourse. Indulgence in tea, and to a less extent in coffee, commonly leads to a condition of the heart where palpitation is experienced on slight causes. In exophthalmic goitre (Basedow's disease) a violent action of the heart is one of its main features. In chorea tumultuous action of the heart is usually present. But among all these conditions palpitation produced by effort is what puts you on the *qui vive* for "disease" as compared to "disorder" of the heart.

Then palpitation may be set up by far-away irritation. Botkin tells of a case where it was set up by a floating kidney. It is common with a misplaced womb, and disappears when the uterus is restored to its normal position. I have seen it linked with prostatic trouble, and also with anal eczema. When paroxysms of palpitation come on without obvious relationship, always institute a careful search; if you can find something, and put that something right, you will usually find the palpitation take its departure.

There is one form of palpitation which has such distinct relations, and is so commonly met with (when the doctor has learned to see it), that it deserves a few words. It is ovarian in its origin. The patient, usually a woman of child-bearing age, complains of more or fewer of the following symptoms, sometimes one being more prominent than the other: She has pain in her side with palpitation. She has vertical headache, with sense of weight and lowness of spirits, and readily weeps. She has nausea, indigestion, and often vomits her food: yet her tongue is clean (this is "clean-tongued" dyspepsia). She may be said to have inflammation of the stomach, and her friends are gravely alarmed about her; and every medical man of experience could relate such cases. She has leucorrhœa and often menorrhagia, with a large, heavy uterus. She cannot hold her water properly, and spasm is readily and easily produced (the centres for the bladder and the reproductive organs lie near together in the cord, and are therefore affected by the same cause). Beyond this the patient has times of heat, itching, and dryness at the seat and in the vagina. In well-marked cases all these symptoms are present. The cause of all these linked phenomena is an irritable ovary—when hunted down. Usually there is pain on defecation if the ovary lies over the bowels; if in front, pain in making water. Usually the ovary can be found swollen, and exquisitely sensitive to the touch. The sexual act becomes impossible from the contact of the glans penis with the tender ovary in many cases. Pressure over the ovary makes the patient feel deadly sick, and as if she would faint, or fall in a swoon. Her sensations are reflected on her face. This is a malady with distinct and unusually well-marked features, yet it has not found its way into our text-books. It is common enough to well repay study; and in a well-marked case, when symptom after symptom, into the arcana of her most private sensations, is asked after, the woman stands as if in the presence of a magician. Such apparently widely separated phenomena apparently have no connection with each other; yet their causation is identical, viz., a troublesome ovary. Waves of nerve-irritation set up in the ovary travel along different nerve-fibres, and find varied terminations. In one case they set up forcible contractions in the stomach, in another they are felt in the terminal fibres of the intercostal nerves as gusts of neuralgic pain. In all they keep the uterus in a state of turgescence, and in most there is leucorrhœa and heavy menstrual losses. Slowly, gradually, step by step, this Proteus revealed itself to me on patient persistent attention to it. Those to whom I have shown a typical case never forget it. Whether an equally vivid impression can be made by a mere description of the case is another matter. It requires the patient to be there to make it believable! with her present, conviction is unavoidable: without her, it looks—well, "like a traveller's tale." Such cases are very common. They do not readily yield to treatment, but a blister over the offending ovary, especially when the menstrual period is due, bromides and laxatives, usually in time produce the desired effect. The most marked case which ever came under my notice was that of a lady whose ovaries had been forced down on each side in front of her bladder by obstinate constipation in youth, and been

pinned there by adhesions. She was barren, and incurable, it is needless to say.

Then there are hearts which do not exactly palpitate, but beat tumultuously always, with paroxysms of true palpitation at intervals; much like the heart in cases of Graves' or Basedow's diseases. Like all disorders of the heart these cases yield but slowly to treatment; and my impression is strong that in cardiac neuroses belladonna is more useful than digitalis. I may remark that the effect of belladonna (administered internally) upon the pupil is so fitful and capricious as to form no guide to its use; and still more its disuse!

Dryness of throat and impairment of vision are more to be relied upon; still the drug need not be given up even for them.

Then there is the condition of "irritable heart," first described by DaCosta, a mixture of neurosis with atony, unfitting the owner of it for hard work; requiring rest for its cure, and patience too. It is most common in my experience among doctors of sympathetic temperament, hard-workers, who carry some of their patients' cares; good fellows who take their professional cares to bed with them—a practice Clifford Allbutt condemned. The immediate cause of the oncome is usually some extra demand involving broken rest, and then the heart becomes irritable and unequal to the demand upon it. Rest is an essential factor in the treatment of such cases, which get well, but only very slowly. It does not appear, from my experience, that the irritable heart ever passes on to structural change; further experience may not corroborate this opinion, but so far it holds good.

Then comes the disturbances of the heart's rhythm, intermittency and irregularity. Irregularity is, as all know, connected with a dilated heart, especially when combined with a mitral lesion. But intermittency may be a mere trick, as when a hale, old North Country woman observed "the tick of her heart had gone wrong." It is not uncommon as a distinct halt in the heart, at varying intervals, sometimes at long intervals, sometimes frequent, in elderly persons, unaccompanied by any evidences of real mischief afoot. At other times it is found with senile changes, and as the muscular wall of the heart is no longer well-fed, so some defective nutrition in the cardiac ganglia may affect the rhythm. When found with hard arteries and a feebly acting ventricle, where a number of the ventricular contractions fail to produce an impression on the radial pulse, then it is at once suggestive and significant. But frequently intermittency is found in young healthy subjects, who feel no inconvenience therefrom unless they are either medical men themselves, or have consulted some one. Diseases of the heart, other than valvular lesions, are so imperfectly taught in the usual hospital career, that most men have but hazy views of cardiac maladies, and consequently the doctor falls back on what he knows, or rather guesses, that there is something serious, and he will not be caught napping in his estimate of the gravity of the case. Cases rejected for insurance, cases rejected for the services, cases where some one had applied a stethoscope without the requisite knowledge to wield it wisely, and so taken alarm and communicated it to the patient, come constantly under my notice; and the apprehensions of the patient can usually be set at rest. There seems no *raison d'etre* for this arythmic condition in many cases.

Then again there is the intermittency so well and ably described by Dr. B. W. Richardson, F.R.S., which dates from some definite time. A shipwreck, some intense emotion, or other exciting cause, and the action of the heart is disturbed. A marked instance of this came under my notice some time ago in the person of a Canadian store-keeper, whose store caught fire one night, and by desperate exertions (personal) he succeeded in quelling the conflagration. Next day he felt his heart intermit. He consulted several medical men at home without satisfactory result, so at last came over here, when I was able to send him away rejoicing; and some eighteen months afterward he called to say how very much better he was; and certainly the heart had largely forgotten that night of effort and excitement.

A common form of intermittency is that found after indigestible meals. Here the old dogma, "irritation of the gastric fibres of the vagus," may be used to conceal our lack of more precise knowledge, or in some cases the presence of elastic gas in the stomach, acting upon the heart through the thin diaphragm, may be the cause of the disturbance. Commonly such disturbance is seen in females of a highly developed nervous system; but is by no means confined to them. It is met with in persons of firmer tone after a debauch, or a period of watching with little sleep, or any other cause which may sap the energy of the nervous system. When such disturbance is found, with evidences of asthenia in the heart, as the result of a hard spell of nursing, for instance, time must be allowed for the heart to regain its tone.

Marked slowness of the heart's action is generally a congenital or family affair; but exceeding rapidity of the heart's action is found in certain cases as a new feature in cardiac disorders. Suddenly the heart will run off at the rate of two hundred beats a minute, and keep this up for hours, the attack passing away as suddenly as it came on, leaving the patient exhausted; and no wonder, for the heart must be like a tetanized muscle with this tremendous activity. The explanation of such cases seems to me to be a rapid discharge of the centres of the accelerator fibres of the vagus in the medulla—a species of discharge allied to that of the motor centres which gives epilepsy.

Then there are cases of arrested action of the heart which may have varied causal relations. Certainly suppressed gout will produce surprising lack of energy in the heart; so much so that I have seen a robust man confined to his bed and feeling as if he would faint on attempting to rise, the whole passing away with an attack of gout, and leaving not a wrack behind to tell of it. In other cases the effect is less pronounced; yet the symptoms of heart-failure are closely simulated, causing much alarm and apprehension of fatty degeneration; such condition also passing away with an explosion of gout.

Comparatively sudden failure of the heart's action is not rarely seen in over-worked men at the present day, and is a malady of which we shall see more ere long, in my opinion. It may occur in stalwart men, and one marked case in a remarkably strong man came under my notice last summer. A yachting tour has resulted in my seeing no more of him. This failure of the heart's action may be due to distinctly different causes. Two illustrative cases will demonstrate this. A lady of admirable physique was severely ill-used by her husband, and left him. At that time she suffered from want of tone in her heart, with attacks of palpitation. Soon she got all right. But she was induced to return to him; he again ill-used her; an attack of bronchitis confined her to the house, it being winter, so she could not escape. When she did the heart was found acting feebly, and, in place of the attacks of palpitations, she was subject to syncopal attacks, in which the heart's action was very feeble, though she never actually fainted. She recovered completely from this condition. Thus there seemed to be exhaustion of the organic nervous system, as the cause. The next case contrasts with this. A medical man of magnificent physique, and great prowess as a swimmer, came into my room one day leaning on his stick. He complained of inability to exert himself, and, at times, of feeling as if he would faint when the heart's action was at once feeble and slow. The heart was sound enough. He also complained of pain betwixt his shoulders. He was rather surprised when I suggested we should step over to Dr. Fevrier's and ascertain what it was that was wrong in the spine. He decided that there was some rheumatic thickening of the spinal meninges, and advised counter-irritation. As we returned,

I explained that this was evidently the cause of his attacks—that, in my opinion, they were due to some irritation acting through the inhibitory fibres of the vagus. This was a new light to him; but the consequence has been that with the disappearance of the spinal symptoms the heart symptoms have vanished, and he is now as active and energetic as ever he was.

Such, then, is some account of a subject yet very far from clear. As to valvular affections and their recognition, probably we have little more to learn. As to changes in the muscular wall, whether gross or histological, our ideas are clearing. But about neuroses of the heart we have still a very great deal to learn. They are on the increase at the present time, like all neurosal maladies. The older men have not described them, in great measure owing to the fact that they did not see them as we are doing. In another generation they will have become so important that a general recognition of them is certain. In the meantime reflex palpitation is being clearly established, though reflex inhibition is a recent step forward. The effects of disturbance acting through the inhibitory and through the accelerator fibres of the vagus are just dawning upon us. When these maladies can be described in the noontide daylight of full knowledge, the writer of these articles will be but a memory being rapidly lost in the busy activity of a future time.

THE PREVENTION OF SUMMER COMPLAINT.

By HENRY DWIGHT CHAPIN, A.M., M.D.,

ATTENDING PHYSICIAN TO THE OUT-DOOR DEPARTMENT, BELLEVUE HOSPITAL (CHILDREN'S CLASS).

UNDER the general term "summer complaint" are comprised a number of different conditions, including simple functional diarrhœa, inflammatory diarrhœa, dysentery, and cholera infantum, as they occur during early life in the heated part of the summer. Cholera infantum is rather a rare disease, and occurs infrequently in comparison with the other affections just mentioned. The term is often loosely applied to every form of infantile diarrhœa occurring in summer, but it should only be used when true choleraic discharges are present. The heavy mortality of the summer diarrhœa of infancy and the difficulty of controlling it, suggests the inquiry whether more cannot be done in the line of prevention. The causes are well known, but do we insist with sufficient stress upon their palliation or removal? One of the most frequent, and to a great extent preventable causes, is improper feeding. The carelessness and indiscriminateness of the diet allowed to young children is a matter of continual surprise. Frequently mere babies are allowed to sit at the table and partake of the same food as adults. I have recently attended a baby, nineteen months old, who experienced some inconvenience after eating huckleberry pie with the rest of the family; and in another case a mother had given her baby, aged fifteen months, a little corned beef hash. Although an unwholesome diet may sometimes be apparently taken with impunity, there still follows an impairment of the digestive power of the stomach and intestines that is a continual predisposing cause of diarrhœa. Nor is it easy to understand how this could be otherwise. The undigestible contents of the stomach and intestines speedily undergo fermentative changes that eventuate in the formation of butyric and fatty acids. These irritating acids frequently stimulate the intestinal follicles to excessive secretion and increase the peristaltic movements. The marked acid odor of the vomited matters and fecal discharges, and the accompanying excoriation of the buttocks, are frequently evidences of this fermentative process. Too early weaning of infants, especially just before, or during the hot months, is a fruitful source of trouble, and should always be avoided.

In order to show the dangers of summer diarrhœa to artificially-fed babies, the Bureau d'Hygiène of the city of Rheims, France, in July, 1882, made a slight change in the form of death-report required in cases of infantile diarrhœa. Children dying from this disease were divided into two classes—those nourished by mother's milk, and those brought up by hand. From July 1st to December 31st, thirty-one infants nourished at the breast and two hundred and seventy-two brought up on the bottle died of infantile diarrhœa. While these figures show a larger relative mortality in hand-fed babies than we are accustomed to see here, they nevertheless enforce an important fact. And yet babies are often removed from the breast at this season for the most trifling reasons. Even serious objections to nursing must be carefully considered before taking the risks of an exclusively artificial diet in hot weather. Despite menstruation, and even of pregnancy, it is often better for the infant to continue nursing until the weather becomes cooler. The thirst naturally produced by the heat causes the baby to wish to nurse or take the bottle very frequently, and as a result colic and indigestion are soon induced, which often eventuate in diarrhœa. The cause of this is evident. There is a continual rapid evaporation from the skin, and as a result of this fluid loss the watery parts of the food are quickly absorbed to make up the deficiency, leaving the thickened solid part to ferment and cause irritation. This cause of diarrhœa can be removed by giving milk or other nourishment only at suitable intervals, but allowing the baby to drink frequently of water, administered in small quantities at a time. The avidity with which it drinks will confirm the indication for its administration. Thin barley-water often agrees better with the stomach in hot weather, except in very young babies. Restricted nursing and a more liberal supply of water would prevent many attacks of diarrhœa in infancy.

It will be impossible to cite all the common errors in infantile diet that help to form such a heavy mortality during the summer months. Every physician can do much in individual cases to lessen this mortality by finding out and preventing these errors. I think that mothers, especially those living in tenement-houses, should receive minute and explicit directions as to the diet of their babies at different ages, and any society that will attempt such a work can do vastly more good than in trying to teach ladies how to support a mangled limb until the doctor arrives.

The intense and all-pervading heat of the summer months forms a factor in infantile diarrhœa that is not so easy to eliminate. And yet much can be done even here in the way of prevention. Heat acts directly and indirectly in causing the mortality due to summer diarrhœa. It acts directly on young children by depressing and rendering more susceptible their nervous energy, by enfeebling the digestive organs, and by increasing but weakening the action of the heart. The indirect effects of heat are caused by fermentative changes in the food of infants and in surrounding domestic and civic filth. The direct connection between decaying refuse matter and summer complaint is shown by the fact that wherever the filth is greatest the death-rate from this cause is highest. There is a plain indication here for preventive treatment. The physician must insist upon the most scrupulous personal and domiciliary cleanliness during the hot months, while boards of health look after the condition of sewers, streets, and drains. Fermentation changes in milk can be largely obviated by boiling it when fresh to destroy all germs, and then adding a little alkali.

The direct effect of heat, aside from any increased foulness of the air that it induces, is an interesting point to consider. I have prepared the following table from statistics derived from the Board of Health. It consists of a comparison of the death-rates from diarrhœal diseases between two winter months and two summer months, together with the mean temperature of each month. Under diarrhœal diseases are included simple diarrhœa, dysentery, entero-colitis, cholera infan-

tum, cholera morbus, Asiatic cholera, diarrhœal gastro-enteritis, and diarrhœal enteritis.

Deaths from Diarrhœal Diseases in New York.

	Jan.	Feb.	July.	August.
1882.				
Mean temp., Fahr.	28.77°	35.21	75.79°	73.42°
Deaths under five years	34	32	1,533	817
Deaths over five years	14	15	131	149
1883.				
Mean temp., Fahr.	25.18°	30.24	74.46°	70.40°
Deaths under five years	32	32	1,355	507
Deaths over five years	14	16	125	116

A glance at this table will show the tremendous increase in the death-rate under the age of five years in comparison with that occurring above that age, the difference in winter being about double, while in summer it is vastly higher than that proportion. It also shows that the month having the highest mean temperature, July, has much the highest death-rate in children under five years, while in cases above five years of age there is no appreciable difference between July and August. In 1882 and 1883 there was an increase of the mean temperature of July over August of from 2.37° to 4.06° Fahr. The difference in heat represented by these few degrees doubled the death-rate in children under five years. As tenement-houses and streets are no cleaner in August than in July, and as there is quite sufficient heat and moisture during August to cause free fermentation in any filth, it is evident that the increased infantile mortality during July is due to a slight increase in the heat, as the other elements causing it are about the same. It is an impressive commentary on the inability of infants to stand a high temperature well, that in 1882 an increase of 2° in temperature was sufficient to raise the death-rate by just 716 young children in one month. It is also seen by referring to the table that the mean temperature of July, 1882, was 1.33° higher than that of July, 1883, and there were 178 more deaths in children under five years in the former month. One explanation of the much higher death-rate of July over August may be that most of the weak, bottle-fed babies die during the first heated period; but this can be offset by the fact that infants a little stronger and having more resisting power finally succumb in August, exhausted by the long-continued heat. I think that sufficient stress has not been devoted to the injurious effects of heat itself upon young children by writers on this subject, and that relatively too preponderating an influence has been given to impure air. The disastrous effects are due to such an intimate combination of these two agents that it is somewhat difficult to estimate their separate influences. But while it is easy to understand the injurious effects of breathing a foul atmosphere, and its depreciating consequences are constantly seen, yet the system, in a sense, gets accustomed to impurity, and throws it off more or less readily. Young children live for months shut up in filthy apartments without dying, and even seeming to enjoy tolerable health.

Of course they grow scrofulous and readily fall victims to disease; but, after all, the organism seems to establish a sort of toleration for filth, just as for arsenic and many other poisons. Continuous and intense heat does not seem to allow of any such escape. It is difficult to explain exactly the reason that excessive heat produces such fatal results in early life. It has been affirmed that, in accordance with the physiological law of vicarious functional action, the over-stimulation of great heat interferes with the secretive powers of the skin, and hence the mucous membrane is excited to a morbid activity. If such a relation exists, it is probably more intimate in children than in adults. Again, the depressing effect of great heat upon the nervous system is familiar to every one. In infants, as the vegetative processes are most active, the great sympathetic ganglia presiding over them hold a very prominent position in their nervous economy, and are hence markedly affected by depressing agents, as heat. Impaired innervation of the stomach and intestines follows, which results in a diarrhœa upon the slightest irritation. Physiological processes, under the especial control of the sympathetic nerves, require a longer time to be influenced by perturbing causes than those controlled by the cerebro-spinal system. According to Dalton, inflammation of any internal organ is rarely established until twelve or twenty-four hours after the exciting cause. The increased mortality in young children does not usually commence until a day or so after the great heat begins, and continues a like period after the cessation of the heated term. While there may be some uncertainty as to the exact way in which heat acts, its unmistakable effects lead us to ask whether even here some preventive measures may not be of avail. The free use of the bath, which is apt to be too much neglected, especially among the poorer classes, will do much to obviate the depressing effects of excessive heat.

In an exhaustive monograph; "On the Effects of High Temperature upon the Public Health," Professor Stephen Smith has thoroughly discussed the subject of warm and cold bathing in this connection. The cold bath is generally used for cooling the body; as it quickly abstracts heat from the surface by conduction, there follows a sudden reduction of the temperature. By constringing the vessels of the skin, however, the blood is forced to the internal organs, which are thereby stimulated to functional activity, and hence as a secondary effect heat is produced. At the same time the mass of blood, by leaving the surface, ceases to remain in contact with the cool medium. After this temporary rise, the temperature soon falls to normal, and equilibrium is restored. The effect of a cold bath upon the body temperature would be thus represented by a curve indicating first a fall, next a rise above normal, and finally a return to the average. When a warm bath is used heat is communicated to the body by conduction, and the temperature is elevated. At the same time, by relaxation of the blood-vessels and skin, the cutaneous secretions are increased, the blood is withdrawn from the viscera, and a cooling process takes place by means of active evaporation. In a warm bath, therefore, the curve first rises, but next falls below normal, and finally reaches the average. An increased coolness follows its administration, while a warm sensation often follows a cold bath on a very hot day. Wunderlich states that in tropical countries, and very hot seasons, no means of cooling is so lasting as a bath or douche of very warm water. The bad effects of great heat upon young children can, then, to a certain extent, be obviated by giving them a suitable bath every afternoon. If the children are old enough, place them in a tepid or warm bath, and let them play there for an hour. The skin will thus be kept active, the blood cooled by being brought to the surface, and evaporation continue for some time. Of course the water should not be used so warm as to produce relaxation. In the case of babies too young for the bath, frequent spongings of the whole body with lukewarm water will fulfil the same indication. A little vinegar or alcohol may be added to the water to aid evaporation. If an infant begins to droop, it is well to give whiskey or brandy, in doses of from two to three drops for every month of its age up to a year, and repeated several times a day. Finally, infants should be taken daily, in the early morning or evening, to parks, or on a ferry-boat, where they can get pure air. If well babies could be thus daily refreshed they would be much less likely to fall victims to summer complaint. In the tenement-house districts of this city they are often confined to the house for days. The slightest manifestation of diarrhœa in children during the hot months should be speedily arrested. Many mothers have an idea that a diarrhœa occurring during teething should not be quickly checked. Very frequently babies

are brought during these hot days to my clinic at Bellevue half dead, or dying, from summer diarrhœa that has been allowed to run on a week unchecked, because it occurred during dentition. Many deaths occur annually from this mischievous notion on the part of mothers.

Just now, as we are beginning to hear much of cholera, adults will also be warned against allowing a diarrhœa to continue unchecked. It is peculiar to notice in this connection that while summer diarrhœa attacks by preference young children, Asiatic cholera, to which it bears some resemblance in many of its symptoms and pathological changes, does not attack, as a rule, the period of childhood.

A CONTRIBUTION TO THE LITERATURE OF PLACENTA PRÆVIA, WITH A HISTORY OF EIGHT CASES.

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The comparative rarity of this accident of parturition with others of the dangerous complications, and the dismal records of its literature, are reasons sufficient for any physician having had any considerable recorded experience with such cases for giving their histories and results to the profession. Even though the results of one's experience may not differ from the average, and he may have no new suggestions to offer as regards their management, yet the recorded histories of their individual peculiarities, indications, and results serve to increase the rather meagre statistics on which, as yet, theories and conclusions are based, and will help to the increase of that larger mass of facts upon which more reliable conclusions may be built in the future. Fortunate for the parturients is it that the danger of exposure to this accident is so small, but unfortunate for obstetric science that its comparative rarity affords any one individual so limited experience from which to generalize. This infrequency, I suppose, arises not merely from its being an unnatural condition, the sequence of conception occurring in an abnormal state or condition of the uterus, or from accidental violence to the mother disturbing the ovum in its earliest period of intra-uterine existence. If this were all, we might expect the accident of placenta prævia to be of even much more frequent occurrence than it is. But I suppose it to be in that wonderful provision against the future danger to the mother, of childbirth at term, in the fact of the natural tendency of this condition to terminate in an early abortion. This condition I believe to be the cause of very many early abortions, often sufficient of itself, oftener perhaps requiring only the slightest accidental violence superadded to induce the abortive process, and which latter accident invariably is alleged as the cause. That the condition of placenta prævia has existed in numerous early abortions of which I have had the care, I have certain and indubitable proof from observation; and when the patient, either by sufferance of nature or the aid of medical art, has advanced to later stages of pregnancy, the tendency to miscarriage still continues, as is evidenced by the prematurity of so many labors after the stage of viability of the child has been reached; and when the tendency to early abortion has been surmounted, the woman has escaped that accident only to become exposed to increasing dangers at parturition in proportion to the stage of advancement toward full term. And as this condition—placenta prævia—is a frequent cause of abortion, so is the reverse equally true, that frequent abortions are a cause of placenta prævia, or of the condition of the uterus which predisposes to the accident. I suppose there is no more frequent cause of a subinvoluted and enlarged and patulous uterus than frequent abortions. Such an uterus, with its unopposed walls, fails to retain the ovum at its fundus on its arrival and entrance from the Fallopian tubes, and it falls by gravity or is washed down by menstrual secretions, or is displaced by slight jars or other violence, and reaches the lower portion of the uterus, there to form its attachment.

I have stated that the literature of placenta prævia presents but dismal records, which fact is sufficiently well understood by the profession in a general way, but only realized in its full significance by one's individual experience. During the past year there have been a number of contributions to the literature of the subject in the medical journals, and which exhibit better results, as far at least as fatality to the mother is concerned, than we can be justified in drawing from the statistics of text-book authorities. Perhaps this may be in some measure because the more favorable exhibits are the most likely to reach the light of publication. I shall make reference to such of this recent literature as has come under my notice, both for the statistical results, for comparison's sake, and also by reference to some of the conclusions.

As to the general average of fatality in placenta prævia, Churchill states (edition of 1860): "In placenta prævia, under ordinary management, one in three, or thereabouts, of the mothers are lost, and more than half of the children." This statement has been criticised as exaggerated. If it represents that of all cases occurring, the unpublished as well as the published, it is probably not an exaggerated statement. In fact, as to the fatality to children it probably does not represent that sufficiently high even under skilful management.

T. Curtis Smith, M.D., of Aurora, Ind., in a paper published in *The Medical and Surgical Reporter* of Philadelphia, July 14, 1883, states that Dr. E. W. King, of New Albany, Ind., has gathered two hundred and fifty cases occurring in the practice of physicians of that State. "Of that number there was a loss of fifty-five mothers, or twenty-two and one-half per cent. The mortality among children was one hundred and thirty-five, or over fifty-seven per cent." These figures would give a loss of mothers of 1 in 4.4. "Of three hundred and thirty-two cases collected by Schwartz, there was one death in 3.86." "Simpson states a mortality of 1 in 3.6." "Trask (Prize Essay) 1 in 3.95." Dr. Smith, author of the paper, gives a history of three cases in his practice, one of which was of central implantation—delivery by version. All the mothers were saved, and two of the children. Dr. Smith remarks: "It is an unhappy fact that a larger proportion of cases of placenta prævia give mal-presentations than where the placenta is otherwise normally attached, and hence version is often a necessary procedure and often causes a fatal issue."

In Dr. Simpson's tables a large number, twenty-three in ninety-one, or about twenty-five per cent., were of mal-presentations, as of shoulder, arm or hand, and head. This fact, besides its bearing on the rate of fatality, has another interest to us in its bearing, or the hint it gives us of the causes of this accident—placenta prævia—to which we have made reference, and shall do so again further on.

D. C. Davis, M.D., of Columbus, Wis., read a paper on this subject before the Wisconsin State Medical Society, and published in the "Journal of the American Medical Association, September 15, 1883," in which he records the exceptional experience of having met with seventeen cases of placenta prævia in sixteen years of practice. He had saved all the mothers, and saved but one child. He gives a brief history of two cases in succession of centrally implanted placenta terminated by perforation and turning, and formulates the following conclusion, emphasized in italics: "*That without doubt rapid perforation, version, and delivery offers the easiest, speediest, and safest chance of life to the child and safety to the mother of any manner or mode of management heretofore advocated and known to me.*"

He also makes the following statement of a fact remarked also by others, and so markedly corroborated by my own experience, and a truth of such import and relevancy, that I consider it worthy of special emphasis:

"Another fact in favor of this mode of procedure is the dilatability of the os and cervix in cases of placenta prævia hemorrhage, for I know whereof I speak when I aver that the uterus, from loss of blood in these cases, is rendered more passive and dilatable, and consequently version is more easy of accomplishment than in any other mal-presentation."

Dr. J. K. Bartlett, Chairman of Section of Obstetrics and Diseases of Women, in his report at the meeting of the American Medical Association in 1883, has the following on this subject: "The report of Mr. Hoffman, of Berlin, on this subject deserves notice from its unusually favorable results. He cites forty-six cases. Of these, three were so near death when seen that there was no opportunity for treatment. Of the remaining forty-three, six were treated by the waiting method and the tampon. In the other thirty-seven no tampon was used. Of the six treated by tampon at an earlier date, one died, two had a long and severe illness, and four children were dead. Of the thirty-seven treated differently one mother only died, and she had been treated by tampon for twenty-four hours, and the placenta was offensive when delivered." (No statement of results to children.)

With this cursory review of some of the recent literature of placenta prævia as an introduction, I will now give briefly the histories of my own cases, eight in all.

Case I.—Mrs. C——, American; seventh labor. Patient weakly and delicate, but obliged to do her own housework. The subject of several abortions. No complications in previous labors at term. Commenced flowing at about seven and one-half months; controlled each time by tampon. Labor was ushered in and accompanied by fearful and exhaustive flooding. Placenta implanted centrally over the os, and was expelled in advance of the child's head, which was immediately after delivered by forceps. The child presented evidences of having been dead for probably some days previous, by reason of commencing decomposition. Woman had a very slow and tedious recovery. This, my first case, and at a very early period of my practice, was the worst case I have ever had. With my present knowledge and experience, in a similar case, I should perforate, turn, and deliver. This, as was shown after delivery, would have made no difference as far as the child was concerned, but would have terminated the labor more rapidly and have saved the woman considerable blood.

Case II.—Mrs. S——, English; ninth labor. Heavy flowing came on at 2 P.M.; easily controlled, and labor pains set in at 8 P.M. Examination showed marginal attachment of placenta, and head already descended so as to check the hemorrhage. The child was speedily born, the placenta coming away immediately after. No interference was necessary to hasten labor, and the woman quickly recovered. The child was dead.

Case III.—Mrs. H——, Irish; first labor. Flowing at frequent intervals for past month. Had pains since morning, with hemorrhage. I saw her for first time at 9 P.M., when she was flooding. Found marginal attachment of placenta. Os only dilated to admit two fingers, but soft and easily dilatable, notwithstanding this was a primipara. There had been great losses of blood, and of course great prostration and relaxation. I dilated rapidly with my hand, turned readily, and delivered speedily. Child dead and decomposing. Mother had felt no life for five days previous. Mother recovered quickly.

Case IV.—Canadian French; sixth labor. I was called to the patient on account of dangerous flooding. Examination showed the os already well dilated, with head presenting, and marginal attachment of placenta; pains feeble and inert, as usual after excessive loss of blood, and insufficient to press the head down with sufficient force to check the hemorrhage. I applied the forceps, bringing down the head, which immediately checked the flow, and readily and easily delivered a large and living boy. A slight incident in this case illustrates how, without great carefulness in the application of the blades in such cases, a serious accident might occur, and one in regard to which I do not recollect to have seen any caution, perhaps because writers usually advise against the use of the forceps in placenta prævia. Having applied the blades, I commenced with a gentle traction, upon which the woman screamed out that I was tearing her. I unlocked the blades and carefully reapplied, with no further complaint on traction. I had doubtless grasped a part of the membrane of the placenta between the blade and head. The woman made a speedy recovery.

Case V.—Mrs. G. B——, Canadian French; tenth labor. I was called to this patient some distance in the country, on account of dangerous flooding, the woman being in eighth month of pregnancy and not yet expecting labor. Examination showed os uteri soft and dilatable, but as yet dilated only to admit finger, and central implantation of placenta; very feeble pains, as usual after excessive hemorrhage, and woman dangerously prostrated for so unadvanced a stage of the labor. I commenced giving ergot to promote contraction, assisted with digital dilatation, and, as soon as practicable, separation of placental attachment on one side until the bag of waters could be felt, which was ruptured. This, with the increasing ergotic contractions, brought the head against the bleeding surface, checking the hemorrhage. Labor progressed favorably, and the child was born, the placenta having become totally detached by the advancing head, and coming before it. The child was dead.

Case VI.—Mrs. J——, Canadian; seventh labor. Threatened abortion at fourth month, with hemorrhage; again at fifth month in increased quantity; recurring attacks in increasing frequency up to the seventh month, when indications of labor set in with such terrific losses of blood that on my arrival I considered it necessary to terminate labor as speedily as possible to save the woman's life. The safety of the child, under the circumstances, was considered a small matter, especially as the woman was only at the seventh month, and I considered that the previous long-continued hemorrhages had in all probability compromised its chances of life. At any rate, it was necessary that assistance should be given promptly to the mother or she would be lost. Examination showed central implantation; os dilated to some extent; easily dilatable and soft; pains inert. Gave ergot liberally; accomplished rapid manual dilatation; detached placenta; performed version, and delivered a dead boy. Woman recovered, but required time to recuperate from her excessive prostration.

Case VII.—Mrs. C. S——, German; fifth labor. Posterior marginal implantation of placenta, with presentation of left arm and prolapsed funis; patient attended by a midwife, who sent for me on account of the mal-presentation and severe hemorrhage since commencement of labor, which was at full term. Os sufficiently dilated on my arrival for immediate assistance, which I proceeded to render by turning the child and delivering by the feet, and which was readily accomplished, and the woman delivered of a dead boy. Woman speedily recovered.

Case VIII.—Mrs. G——, German; mother of two healthy children, born at full term, by first husband, and of numerous abortions by her second. The case was one of miscarriage at sixth month, and unaccompanied or preceded by hemorrhage until after perforation of placenta, and then comparatively insignificant. The case was peculiar and unique. Threatened abortion, as usual, at about the third month, with discharge of water, but without hemorrhage. Water had continued dribbling away ever since. Labor came on and progressed very slowly on account of inefficiency of pains. The os having after many hours become well dilated, I concluded to rupture what, from the undeveloped condition of placenta at that stage of gestation, from its being free from attachment in the neighborhood of the os and yielding

before the pressure of the finger, and from the absence of hemorrhage, I did not suspect to be the placenta, but the amniotic bag, for the purpose of engaging the fœtus in the mouth of uterus, and increasing the force of the inert pains. I found this unusually thick, and more difficult of penetration than usual, and its accomplishment was followed by a discharge of blood for the first time. A leg was found presenting and brought down, and the body engaging the hemorrhage ceased and child was soon born. It was felt to move during extraction, but showed no indications of life after it was born, probably owing to some delay with the head. Attention was now given to extraction of the placenta, which was found covering the os and firmly attached away from its margins. So firmly adherent was it, and so sensitive the os, and so painful were manipulations, that it was necessary to put the patient under chloroform for that purpose. Examination of the placenta showed the rent near one border, through which the child had been extracted. The separation of the placenta, in this case, I suppose to have been going on gradually since the rupture of the amniotic sac in the third month, and accompanied by inflammatory changes in the parts, such as to close the mouths of exposed vessels and prevent hemorrhage. Dr. Simpson has given as one of his therapeutical deductions in regard to the physiology and treatment of placenta prævia, "that inflammation of the uterine structures, particularly of the cervix, is especially likely to supervene when delivery is attended by placental presentation." This was a complication of my first case also, notwithstanding numerous exhausting hemorrhages, and which retarded her recovery. In that case it may have been in part due to, or aggravated by, the use of the tampon.

These are all the cases of placenta prævia it has been my good, or bad, fortune to meet in a practice extending over thirty-two years. I have met with three cases in one year, and then again have passed a period of ten years without meeting a case.

Analysis of the cases shows four of them central or completely covering the os—Cases I., V., VI., and VIII.; and four marginal—Cases II., III., IV., and VII.

Two cases were delivered by forceps, one of central implantation, in which case the child showed evidences of having been dead for days before labor set in; the other, a case of marginal implantation, the child was born alive and healthy, the os being sufficiently dilated to admit of easy application of forceps on my arrival. This was the only living child of the whole eight cases. Three cases were delivered by version; one of central, in which the placenta was detached for that purpose, and two of marginal: one of the latter was complicated by descent of funis and an arm. One case by perforation of placenta and delivery by presenting feet. One case by manual dilatation and ergot only, and one requiring absolutely no interference, a speedy and easy delivery, and yet the child was born dead. In all the cases of version or manual dilatation, the os was found soft and easily dilatable, in accordance with the observation of Dr. Davis, "that the uterus, from loss of blood in these cases, is rendered more passive and dilatable, and consequently version is more easily accomplished than in any other mal-presentation." All the mothers were saved, and but one child. But how little bearing the management of the cases during labor has had on the rate of mortality to the infants will be shown by a consideration of the circumstances of their histories. Two of the children showed evidences of having been dead for days previous to labor—destroyed by the previous hemorrhages, by asphyxia, as Cazeaux states, from interference with the placental circulation. One was a case complicated with other mal-presentations, rendering version necessary, and in such cases alone the mortality is very great, and when superadded to placenta prævia leaves but a hopeless chance for the safety of the child. One was a case of premature delivery at six months, in which the child would have been in any case lost, because of its immaturity. This would leave but four cases, or fifty per cent., in which the accidents or management of labor could be at all supposed to have affected the rate of mortality to the infants. But in addition, Case II. was an easy and speedy labor, with absolutely no call for interference, and yet here the infant was born dead, destroyed, doubtless, by the preceding hemorrhage, only a few hours before; and again two more of the cases (V. and VI.) were premature deliveries at eight and seven months, in which cases, if not destroyed by the hemorrhages, the chances of life to the children were correspondingly lessened by their prematurity. In Cases I. and V., the placenta came in advance of the child, which would seem to be a circumstance almost certainly fatal to the infant, and very dangerous to the mother. Churchill remarks in regard to such cases, "the mother is not always lost in these cases;" and again, "now it appears that these instances are not so rare as was supposed." He states that Dr. Simpson has collected one hundred and thirty cases in which the placenta was either expelled or extracted first, and that in all ten women died, or one in thirteen—and of one hundred and ten cases the infant was born dead in seventy-three, or sixty-nine per cent., and saved in thirty-three, or thirty-one per cent. Acting on the now generally recommended and accepted method of perforation of placenta and version, this accident will be less likely to occur, and yet we venture to say that this operation will not always prevent the extrusion of the placenta in advance of the child. I have had more than once separation of a normally attached placenta in the operation of turning for abnormal presentations, and have lost the child probably in consequence. It will be no less likely to occur when attached about the os.

The one only child saved of my eight cases was delivered by the generally disapproved method of the forceps. No doubt the timely and opportune application was proper and correct in this case. The summary of results from the cases given in the papers to which I have made reference is as follows:

	Number of cases.	Mothers saved.	Per cent.	Children saved.	Per cent.
T. C. Smith	3	3	100	2	67
D. C. Davis	17	17	100	1	6
Hoffman	46	41	89	—	—
My own	8	8	100	1	12.5
	74	69	97.25	4	14

These results, so far as any conclusions may be legitimately drawn from such meagre records, show much more favorably for the mother, and contrariwise for the infant, than the results commonly given by writers; and that while there seem to be good reasons for believing there has been an improvement in the chances for the mother, that no such encouragement is warranted as regards the child; nor from a consideration of the nature and circumstances of the accident does it seem probable that any great improvement in that respect can be attained for the following reasons:

1. If my cases are a fair average exhibit, from twenty-five to thirty-three per cent. of all will be destroyed by disturbances of the circulation previous to labor.

2. From Simpson's statistics twenty-five per cent. of all cases will be complicated with other mal-presentations, compromising the life of the child in a very large proportion of them.

3. From twenty-five to thirty-five per cent. of all will be premature births. If, then, to these circumstances we add the risks from hemorrhage in labor, besides the risks from version and other artificial interference and aids, we can understand that the risks to the child must always remain so great as to permit of the safe delivery of but a small proportion, and we may also understand why

nature, in her beneficence, looking to the safety of the mother in the great majority of the cases, probably prefers the sacrifice of the offspring by an early abortion.

In conclusion, what are the causes of this accident of parturition which, despite of all proposed methods of management, continues, in its fatality to children, as merciless as the execution of the Herodian edict for the slaughter of the innocents, and, more merciless than that, destroys also a large percentage of the mothers, causing lamentation and mourning in households, and anxious care and harassing disappointment, and vexatious dissatisfaction to the physician with the results of his most energetic and conscientious efforts to bring the labor to a safe and happy termination, not only as regards the mother but to save her offspring? The condition is unphysiological, and I should suppose peculiar in and possible only to the human female, unless, perhaps, the quadrumana may be exposed to it. Writers have particularly called attention to the fact of the frequent complication of this accident with other coincident mal-presentations.

Dr. Simpson, as we have stated, gives a table of twenty-three cases of other mal-presentations in a table of ninety-one cases of placenta prævia. Dr. T. Gaillard Thomas, in a clinical lecture on "Causes and Treatment of Abortion," published in the *New York Medical Journal*, January 24, 1884, states that "there are two great causes of abortion—first, a posterior displacement of the uterus, which interferes with a proper development of the organ; second, syphilis." But the first is the only one which has any relevancy to our subject, and this because it is evidence from eminent authority of that condition as the most frequent cause of abortion which we regard as the most prolific cause of mal-positions and placenta prævia, not posterior displacement of itself, but the cause of posterior and of other displacements. For what is the cause of these displacements?

The cause is in the increased bulk and weight of the uterus from subinvolution, as is also that of unnatural relaxation and patency. In a paper before this Society, two years ago, on some mal-presentations, I I stated this as the prolific cause of mal-presentations, placenta prævia, and abortions. These accidents—mal-presentations and placenta prævia—occur for the most part in multiparæ or in multipregnant women, and frequent conceptions, but more especially repeated abortions, are the most prolific cause of unnatural relaxation and patency, and are, again, the cause of too frequent conceptions. A relaxed uterus with an enlarged and patulous cavity fails to arrest and detain the ovum on its arrival in the uterus from the Fallopian tubes, or it is washed down by the menstrual secretions, or is more readily displaced by the movements of the mother, or by any violence or shock, and is thereby caused to form an unnatural attachment, and the same conditions may favor unnatural positions in the developing and growing germ from the very commencement of intra-uterine existence.

An Old Mode of Detecting Rabies.—To enable a person who had been bitten by a dog to ascertain whether or not the animal was rabid, the *Universal Magazine*, a London monthly publication, in its issue of November, 1753, published the following, which is accredited to "The Memoirs of the Royal Academy of Sciences at Paris:" "When a person hath been bitten by a dog that is apprehended to be mad, it commonly happens that the dog is killed before one is assured of his condition, and the person bitten continues in a cruel uncertainty. Mr. Petit, the surgeon, hath an expedient for putting an end to this uneasiness. He rubs the throat, the teeth, and the gums of the dead dog with a piece of meat that hath been dressed, taking care that there be no blood to stain it, and then offers it to a living dog. If he refuses it with crying and howling, the dead dog was certainly mad; but if the victuals have been well received and eaten, there is nothing to fear."

ON THE UNTRUSTWORTHINESS OF FLUID EXTRACTS,

With Practical Notes Regarding Rhus Toxicodendron, Pulsatilla, Cereus Bonplandi, and other Plants.

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Brooklyn, N. Y.

"Untrustworthy" ought to be written after the name of many of the fluid extracts of medicinal plants as usually found on our apothecaries' shelves. I have a habit of tasting, at a subsequent visit, of nearly all the medicines I prescribe, and I find there is a large number of the fluid extracts in many of the officinal and unofficinal[1] forms prepared for our use by the pharmacists which taste exactly alike. That taste is a peculiar, stale, dirty, gritty one, often entirely wanting in the special aroma peculiar to each plant in the green state; and just here, I make no doubt, is the secret of the untrustworthiness of many of these "medicines." Instead of the fluid extract being made from the recent or fresh green herb, it is too often made from a dried, more or less inert plant, from which the volatile, and often the active principle has, perhaps, wholly evaporated.

This fact will no doubt go far to explain the sentence, "The medical virtues of this plant are too uncertain to inspire any confidence in it," or something meaning the same thing, so often found in the dispensatories. To particularize: The article rhus toxicodendron, which is dismissed by the National Dispensatory with the remark quoted above, after being thought worthy to be considered officinal under the head of Toxicodendron, is, there can be no doubt, a plant of definite and considerable power medicinally, if rightly prepared and properly used. Dr. Thomas Gifford, of Laurel, Ind., speaks very highly of its curative action in sciatica, having used it successfully for many years, even in cases of one, two, and three years' standing. Dufresnoy called attention to the rhus toxicodendron as a remedy in herpetic and eczematous diseases as early as 1798. Phillips, in his work on "The Materia Medica, etc., of the Vegetable Kingdom," refers to the rhus as a very powerful therapeutic agent in "various subacute and chronic rheumatic affections of the fibrous tissues generally." Dr. H. G. Piffard, of New York, in an editorial note in Dr. Phillips' book, confirms its usefulness. Speaking of the probable error sometimes made by physicians, mistaking the "worse-at-night" rheumatism for syphilitic rheumatism, Dr. Piffard says: "In a number of these cases we have obtained most decided and prompt relief from rhus." The whole matter turns upon the mode of preparation. The officinal fluid extract, of which it is advised to give from one to ten drops, is probably good for nothing. Dr. Gifford makes a strong tincture (one part to two of alcohol) from the green herb, gathered the last of May or the first of June, previous to the flowering of the plant. It is gathered after sundown of a lowery day. He likely in this way preserves the toxicodendric acid. Of this tincture he gives from one-tenth to one-fifth of a minim in a spoonful of water twice a day, and in some cases he advises even smaller doses. Dr. Phillips advises a tincture made by macerating one part of fresh leaves in two parts of alcohol; of this he advises a small fraction of a minim in rheumatic and cutaneous affections. The tincture of the German Pharmacopœia is made from five parts of the fresh leaves to six parts of alcohol.

Again, in the National Dispensatory we find after the description of pulsatilla, lately made officinal, "No sufficient grounds exist for its use in therapeutics." Nevertheless pulsatilla is often spoken of in the journals and

[1] I mention in this connection the so-called *unofficinal* medicinal preparations because it is a well-known fact that there are a large number of what the makers of our pharmacopœias fail to recognize as *officinal*, for decade after decade, which are, nevertheless, "in the shops," and constantly being used by very many practitioners.

in other ways by such men as Sturgis, Piffard, and Fox, of New York, and Borchiem, of Atlanta, Ga., as a remedy of much value in glandular inflammations and particularly in epididymitis. Phillips ("Vegetable Materia Medica"), after advising its use in several inflammatory conditions, says, "The fluid extract is unreliable," and recommends a tincture made of equal parts of the expressed juice and alcohol, of which he gives from one-tenth to five minims.

There is another article or herb product which I have been in the habit of using and recommending for some eight to ten years, more especially for cardiac insufficiency, that I fear may soon be hard to obtain in its proper form, as I learn that one, at least, of the drug manufacturers is already preparing and recommending a fluid extract of it. I refer to the cereus bonplandi. It is not mentioned in any of the regular works on Materia Medica to which I have access. I first saw it spoken of in the *Medical Brief* by a Dr. Goss, who, I think, is an "eclectic." The preparation he recommended and the one I have always used, when I could get it, is a strong tincture of the green herb, prepared by a German druggist, R. E. Kunze, 606 Third Avenue, New York. The tincture should have a decidedly green tint. There is a preparation of a less decided tint, probably made from a partially dried herb, which is occasionally used, but is scarcely reliable. The homœopathists have a brown preparation of the cereus grandiflora (night-blooming cereus) that I find sometimes substituted, but which has almost no value in my hands. The green tincture of Dr. Kunze is one of the most satisfactory remedies I use. In ten-drop doses, three or four times a day, it will correct "palpitation" and irregular action of the heart from functional derangement with so much certainty to the physician and comfort to the patient, as to be a source of profound satisfaction. It seems to give tone to the nerves and centres controlling the heart's movements. Even in organic disease of the heart, with valvular insufficiency, whether resulting from rheumatic endocarditis or otherwise, this remedy, through its steadying power, particularly in young subjects, gives positive relief, and in some cases appears to exert a curative action.

There are many other plants and plant products of more or less acknowledged usefulness which are gradually falling into disuse because, possibly, of the prevalent modes of preparation. The phytolacca decandra, a succulent plant, is a powerful remedial agent in local inflammatory conditions—notably in mastitis—used internally and externally, and yet the fluid extract of the dried plant is of doubtful utility. The silphium gummiferum (rosin weed) has probably some virtue in bronchial catarrh and like affections; I saw an account from a French journal, some years ago, in which it was thought to have cured phthisis. I have used it considerably, with apparent benefit, in phthisical cases. It is used in the prairie districts of the West as a domestic remedy, and for horses with the "heaves." The plant probably has virtue, but the only form in which we can get it is the fluid extract, and that, as in the case of the others named, and of many more that might be named, promises but little. I have before me a long list of fluid extracts as prepared by one of the leading wholesale drug manufacturers of New York, of which the dose list in itself is suspicious, in that in many cases it would be impossible to follow directions without danger, if the remedies were made, as they should be, with the requisite caution and care to obtain all of curative value each individual plant, at its best, affords.

I desire to add, what is evidently apparent from what I have already written, that I make no claim to practical pharmacy. My remarks should not be received as being made in the spirit of criticism, but as an expression of desire that the evils referred to might be corrected by an effort on the part of our drug-makers and pharmacists to more thoroughly study individual drugs and plants, and so treat them as to capture that in them, whether it be one or many virtues or "active principles," as that there may be results commensurate with the necessities caused by disease, and as far as may be possible uniform results when the medicine is properly administered.

A STAPHYLOMATOUS EYEBALL ENUCLEATED FOR SYMPATHETIC IRRITATION, CALCIFIED CORNEA, ETC.

REPORTED BY DAVID WEBSTER, M.D.,
PROFESSOR OF OPHTHALMOLOGY IN THE NEW YORK POLYCLINIC, ETC.

MRS. HENRY M——, sixty-three years of age, was referred to Dr. C. R. Agnew by her family physician on March 24, 1883, for advice in regard to her eyes. She gave a history of having caught cold while suffering from an attack of the measles when she was seven years old. Both of her eyes were severely inflamed then and for some time afterward. From present appearances it is evident that she had keratitis and cyclitis. The cornea of the left eye is protuberant from softening and dilatation of the eye-wall in the ciliary region, and presents two large patches of dense, apparently cicatricial opacity. The iris, indistinctly seen, is shaky, showing a probable dislocation of the lens and a fluid vitreous, and the eye is without perception of light. The right eye has corneal opacities from old keratitis, and is highly myopic with greatly reduced vision from irregular astigmatism. Both eyes have been irritable for the last few days.

Enucleation of the left eye was advised at this visit, but was deferred by the patient for nearly a year, during which time she was troubled with recurring attacks of conjunctivitis affecting both eyes. At length she consented to enucleation, and the operation was performed by Dr. Agnew on February 28, 1884.

The eyeball, which seemed to be much elongated antero-posteriorly, was put into Muller's fluid, and was examined by Dr. T. Mitchell Prudden, who on June 13, 1884, made the following report:

"*Macroscopical examination.*—The eye was enlarged, measuring 2.7 ctm. transversely and 3.3 ctm. antero-posteriorly. On section, the *lens* is loosely attached and lies considerably behind the iris at one side of the antero-posterior axis of the globe. There is attachment of the iris to the cornea at one side. The *vitreous* is soft and partially disintegrated. Depression of the *optic papilla* 1.5 mm. deep. *Retina* on one side partially detached from the choroid.

"*Microscopical examination.*—The anterior epithelium of the cornea and the substantia propria are uneven, being in some places thinned and in others thickened. The substance of the cornea shows in the anterior layers, chiefly on one side, extensive infiltration with larger and smaller irregularly spheroidal masses and globules of *calcium carbonate* (carbonic acid given off on addition of hydrochloric acid). Cornea also irregularly infiltrated with spheroidal and variously shaped cells.

"The *iris*, which is in part atrophied and much distorted, is firmly adherent to the cornea a little to one side of the antero-posterior axis of the globe, over a small area.

"The *ciliary body* is drawn backward, flattened, distorted, and partially atrophied.

"The *lens* shows in a few places hyaline degeneration of the fibres.

"The *choroid* is normal except for moderate congestion of blood-vessels in places.

"The *retina*, in general, appears normal, except that there is slight detachment on one side, and scattered areas of œdema, particularly of the external molecular layer. There is atrophy of the retina, however, about the glaucomatous depression of the optic nerve entrance.

"*Anatomical diagnosis.*—Keratitis with calcification in anterior layers of cornea, flattening, and atrophy of ciliary body, anterior synechia, displacement of lens with commencing degeneration, moderate congestion of choroid and slight detachment of retina, glaucomatous excavation of optic disk."

ELECTROLYSIS IN STRICTURE.

By H. W. STREETER, M.D.,

ROCHESTER, N. Y.

I HAVE seen such remarkable statements, from time to time, of the effects of electrolysis in the treatment of urethral stricture, that I am constrained to give the results of my experience. I would premise by saying that I regard any contraction of the urethra smaller than the normal meatus, as tested by bulbous sounds, as a stricture; and that no case is cured as long as such contractions can be detected. For although the symptoms may be relieved for the time, they are liable to return at any time upon slight provocation. No recognized authority upon surgery or electricity with which I am acquainted, claim any such results as these writers in the journals. Otis says, in a private communication to the writer, he thinks it more likely to cause, than to cure stricture. Keyes writes that he had tested it in a series of cases in Charity Hospital and found it worthless. Particulars of these cases are found in Keyes and Van Buren on "Venereal Diseases." Rockwell, one of the authors of Beard and Rockwell's "Electricity," speaks in very guarded terms of its effects.

I determined to try it as occasion should present. I tried it in all upon seventeen patients, several of whom had heard of it, while the others were bitterly opposed to urethrotomy, and all had become dissatisfied with dilatation. With weak currents of six to eight cells, at intervals of eight to fourteen days, I produced no effect; with stronger currents, the only effect was irritation and more or less inflammation. The calibre of these strictures varied from six to sixteen, and my applications varied from six to twelve in each case. In thirteen of the cases I used currents which could be barely felt by the patients (as advised by the writers referred to), and created no irritation. With four patients, who wanted anything rather than the knife, and in whom repeated weak applications failed, I tried the stronger currents, with only bad effects. All of these cases I afterward cut with Otis' dilating urethrotome, with the result of producing immediate relief, and in most of the cases, I have reason to think, permanent cure. In no other similar affection—stricture of the œsophagus, of the rectum, or organized abnormal tissue, have any such results been claimed for electrolysis when applied in such weak and superficial method as described in the articles referred to. And I know of no reason—clinical, physiological, or therapeutical—why such results should be expected, or why the urethra should be an exception to all the other tissues of the body. Any deviation from the normal calibre of the urethra is liable to produce local and reflex symptoms, which will continue as long as the stricture remains. Recent strictures may be relieved, and some cured, by dilatation, but I do not think either reason or experience leads us to expect that many strictures can be permanently cured by dilatation, and we all know how unsatisfactory even is the *relief* given by sounds. Urethrotomy by Otis' method is based on common sense, and *should* theoretically cure stricture. It may be said of it, in the great majority of cases, that it is simple and easy of performance, safe, less painful than dilating by a full-sized sound, *i.e.*, one large enough to do any good, produces immediate relief, and if not permanent cure in every case, it is more effectual than any other method yet devised.

MEDICAL STUDENTS IN GERMANY.—The following figures show the number of medical students at the chief German universities during this term: Berlin, 924, including 20 from America, 6 from Asia, and 2 from Africa; Jena, 162; Bonn, 289; Königsberg, 267; Halle, 282; Göttingen, 189; Giessen, 126; Tübingen, 224; Strassburg, 172. The autumn cyclus of the holiday course of lectures for practising medical men will take place at Berlin from September 24th to the end of October.

A PLEA FOR THE USE OF DELICATE TESTS FOR ALBUMEN IN URINE.

By GEORGE B. FOWLER, M.D.,

PROFESSOR OF PHYSIOLOGICAL CHEMISTRY, NEW YORK POLYCLINIC; VISITING PHYSICIAN TO THE NEW YORK INFANT ASYLUM.

WHETHER, in every instance, the presence of albumen in urine, in any proportion, is necessarily the signal for an alarming prognosis, is a question destined to receive much attention in the near future. Yet, whatever be the verdict, I am convinced that albuminuria is not a physiological condition. And, while many apparently healthy people may present this symptom in a given case, we certainly are not yet prepared to say what will be the ultimate result.

To be in perfect health implies a condition easier to comprehend than define. Many trivial indispositions connected with various organs have, from their tendency to pass off, taught us indifference. But ignorance on the part of the patient of the possible significance of his slight symptoms, and failure or inability of the physician to apply minute methods of investigation, have too often proved the source of future regret and disaster.

If we are dealing with a supposed "functional" case, and look anxiously for the gradual disappearance of the morbid chemical reaction of the urine, how much more does it not behoove us to be familiar with those delicate processes, by whose means we shall be enabled to follow the intruder across the pathological territory, and back into physiological bounds.

And, moreover, if it is ever to be established that a trace of albumen in the urine is compatible with health, it will be by a skilful use of the more delicate tests. I am, therefore, not in harmony with those who say that heat and nitric acid are sufficient; for this is equivalent to the dogmatical assertion that where these reagents fail there is no albuminuria. It is a significant fact, in this connection, that neither albumen nor any of its allied compounds are met with, under normal conditions, in any of the excretions. In fact, the loss of these substances is expressly guarded against by one of their characteristic qualities, namely, indiffusibility.

The only albuminous derivatives capable of ready transudation are peptones; yet, although these are produced in such great quantity in the stomach and intestines during digestion, their loss is prevented by the provision that they must pass through the liver before entering the general circulation. In the liver they are transformed into matters having no tendency to escape.

As regards the reagents most to be relied upon in testing for albumen in urine, I will simply say a word, for much has recently been written upon this matter.

In order to determine the comparative delicacy of some of the methods, I used the serum of ox-blood, carefully drawn from a firm clot, and mingled it in varying proportions with normal urine. Now, the composition of this serum is as follows: Water, 90 parts; proteids, 8; fats, salines, etc., 2 = 100 parts.

The proteids consist of two forms of albumen, *serum-albumen* and *paraglobulin*, in about equal proportions. As these two substances are always associated in albuminous urine, and respond to the tests to be enumerated, their distinctive qualities need not be dwelt upon, and they are together reckoned as albuminous. But the trial solutions having been made with serum and water, in order to know the proportion of *albumen* detected, we must go through with a little calculation based on the proportion of albumen present in the serum. This has been done, and the results, as given below, are for albumen calculated as dry. I speak of this because most of those who have gone over this ground leave us in the dark whether with any given method (having used serum or white of egg) the percentage detected means the percentage of serum or white of egg respectively, or the actual proportion of albumen present.

As a result of numerous and very careful trials with

heat, nitric acid, picric acid, acidulated brine, potassium, ferrocyanide and acetic acid. potassio-mercuric iodide, and other methods, I found the following to be their respective capabilities :

Heat, in neutral solution, fails with .018 of one per cent. ; in slightly acid solution, reacts with .018 of one per cent.

Acidulated brine, about same delicacy as heat.

Picric acid, if carefully applied, will detect .008 of one per cent. But being of low specific gravity it is sometimes difficult to employ the contact method with it. Its decided yellow color masks its effects and interferes with its delicacy.

Nitric acid is satisfactory with an .008 of one per cent. solution of albumen, if the contact method is employed. The greater the diameter of the test-tube, and the longer it stands perfectly still, the more marked is the ring of coagulation.

Potassium, ferrocyanide, and acetic acid.—The urine being first made decidedly acid, and then a few drops of the ferrocyanide added, feint clouds of opalescence will be seen in an .008 of one per cent. solution of albumen.

Potassio-mercuric iodide[1] gives a very manifest reaction with a .004 of one per cent. solution, and, hence, is the most delicate of all.

It should be borne in mind that both picric acid and the potassio-mercuric-iodide solution, also precipitate peptones, quinine, morphia, strychnia, and perhaps other alkaloids, and the former may throw down the urates. All of these precipitates, however, completely disappear on heating the solution, thereby enabling us easily to distinguish them from albumen.

These percentages may seem to some very small and not worth detecting; but I contend that, pathologically considered, they are by no means insignificant. Let us look at it practically. Serum contains about eight per cent. of albumen (or proteids precipitable by the foregoing means). We pass about 1,500 c.c. of urine per day, and urinate about six times. That would be about 250 c.c. for each time. Now, 1 c.c. of serum in each of these voidings, or 6 c.c. in the whole, would give us .031 of one per cent. of albumen.

So we see that, although the percentage of albumen may be down among the thousandths, an appreciable quantity of blood-serum is thereby represented. And, to my mind, the leakage of 6 c.c. of serum through the kidneys per day is abnormal, and suggests danger ahead. At any rate it is well to be able to know it, so as to keep a sharp lookout.

For those who may desire to learn more regarding the origin and development of these new tests, and who are not familiar with the precautions to be observed in their application, I append a brief bibliography :

"Urine Testing," *Lancet* (Am. ed.), May, 1883, p. 466; Pavy : "Urinary Test Pellets," *Lancet* (Am. ed.), April, 1883, p. 318; Roberts : "Acidulated Brine Test for Albumen," *Lancet*, December, 1882, p. 438; Johnson : "Picric Acid as Test for Albumen," etc., *British Medical Journal*, March 17, 1883, p. 504; Johnson : "Picric Acid as a Means of Distinguishing Albumen from Peptone," *British Medical Journal*, March 31, 1883, p. 64; Ralfe : "Picric Acid as a Urinary Test," *British Medical Journal*, April 7, 1883; Johnson : "Picric Acid as a Test for Albumen," *British Medical Journal*, May 5, 1883 : Ralfe : "Peptones in Urine," *British Medical Journal*, May 12, 1883; Oliver : "On Bedside Urinary Tests," *Lancet* (Am. ed.), April, 1883.

A SATIRICAL medical review, called *Dr. Sangrado*, is published in Madrid. It was begun on November last, and has appeared every fifth day since that time.

[1] Formula :

Pot. iodid.	3.32 grm.
Hydrarg. bichlorid.	1.35 grm.
Acid acetic.	20 c.c.
Aqua destil. ut. ft.	100 c.c.

M.

Progress of Medical Science.

FOOD FOR THE FEBRILE. — Dr. Zasetzky (*Vratch*) considers the questions of food and drink, air, and rest, for the febrile. He unconditionally repudiates the old doctrine of keeping the patients on a "hungry" diet, consisting of carbohydrates, and insists on the necessity of their sufficient feeding. Albuminates, fats, and carbohydrates must be represented in the food for the febrile exactly in the same proportion as in the food for the healthy. He supports this demand by the results of observations, according to which febrile patients assimilate albuminates, fats, and carbohydrates in the same degree as healthy subjects. Food must be given to the febrile in comparatively small amounts at a time ; it must be mechanically prepared for digestion and must well satisfy individual tastes and habits of the patients. The febrile must be allowed to drink freely, and to choose for drinking what they like (water, wine-and-water, tea, coffee, milk, toast-water, syrup and water, or fruit-juice in water). The temperature of the drink must vary according to the patient's state (that is, when fever is high, the drink must be cold ; otherwise the patient may drink what he likes at the ordinary temperature). As regards the temperature of the air in which the patient breathes, the author comes to the conclusion that it must oscillate between 56° and 63° F., not exceeding the latter limit. The necessity of most carefully maintaining the purity of the air in the patient's room is placed by the author on a level with the necessity of good feeding. Passing to the last, but not the least, point of his article, the author substantiates his demand for the greatest possible amount of rest for the febrile. Having pointed out the well-known data referring to the influence of muscular work on various systemic functions, the author mentions his own experiments on the healthy, tending to prove that moving about leads to an increase of from four to eighteen per cent. in the excretion of nitrogen in urine ; most probably the influence of movement on nitrogenous metamorphosis in the febrile subjects must be still more powerful.

GASTROSTOMY, ŒSOPHAGOSTOMY, AND OTHER OPERATIONS FOR THE RELIEF OF STRICTURE OF THE ŒSOPHAGUS.—The frequency of carcinomatous obstruction of the œsophagus in middle life, and of cicatricial or fibrous stricture, particularly in subjects of tender years, has led Dr. S. W. Gross to collect, in the July number of *The American Journal of the Medical Sciences*, the somewhat numerous and scattered instances of the various operations which have been practised for their relief, and study and compare their relative value and disadvantages. To fulfil this object intelligently he has considered separately carcinomatous and simple strictures. The four operations applicable to carcinomatous stricture are gastrostomy, œsophagostomy, internal œsophagotomy, and œsophagectomy, of which the first three are palliative and the last curative. From the consideration of one hundred and ninety-four cases of operative procedure, Dr. Gross finds that gastrostomy has proved to be the simplest, most rational, and safest of the four operations for the relief of carcinomatous stricture. Increasing experience demonstrates that the results are growing better and better, which cannot be said of œsophagostomy ; and there is every reason to believe that the successes will become more numerous if it is resorted to as soon as the diagnosis of the disease has been made, and before the powers of the patient are materially impaired. The few deaths do not constitute an argument against its adoption ; while "every recovery is a clear gain, and a fatal issue is simply the natural termination forestalled." The operations which have been practised for cicatricial stricture are gastrostomy, œsophagostomy, internal œsophagotomy, combined œsophagotomy, and retrograde di-

vulsion. Dilatation, Dr. Gross holds, is merely a palliative remedy, and sufficient time has not yet elapsed to test the value of divulsion through an opening in the stomach. Combined œsophagotomy for strictures near the cardia is only applicable to children, and may prove of value in strictures impassable by instruments introduced through the mouth. Internal œsophagotomy, if performed at all, should be reserved for comparatively recent and short strictures, and œsophagostomy is only applicable when the incision can be made below the obstruction. Gastrostomy, he holds, is the best and safest operation for simple stricture of the œsophagus. From the great difficulty of managing cicatricial stricture in children by dilatation, which is due partly to the struggles of the subjects and partly to the disinclination of the parents to distress the child, Dr. Gross holds that dilatation should be resorted to only when the inflammation has subsided and the denuded surface is in a granulating condition. When the constriction is of some standing, and efforts at dilatation prove fruitless, gastrostomy will prove to be the safest and most beneficial operation for prolonging life.

Theories of Color-perception.—Dr. Swan M. Burnett, of Washington, D. C., discusses the various theories of color-perception, and points out that none of them accounts, in a consistent manner, for all the phenomena of normal and abnormal colored vision, and that, moreover, there are certain objections on physical grounds which, with our present knowledge of the laws of molecular and wave-motion, are insurmountable. He advances a theory which, he thinks, meets the requirements of the case in the light of recently acquired knowledge. He holds that it is essential to do away with the idea of the retina as a differentiating organ, and that it should be looked upon simply as receiving and transmitting structure which shall give up faithfully to the optic nerve the impressions made upon it by the waves of the luminiferous ether. These impressions are carried by the nerve to the brain, and are there properly differentiated and converted into sensations. He believes that by this means all the phenomena of color-perception and color-blindness can be explained in a natural and consistent manner without the necessity of imagining new tissues, or novel or unusual reactions of these tissues to light. Dr. Burnett considers the retina to be a substance whose ultimate structure is such as to allow it to respond at one and at the same time to a large number of ethereal vibrations; at least such a number as shall be represented by the clearly distinguishable colors of the spectrum.—*American Journal of the Medical Sciences*, July, 1884.

A Case of Tubal Pregnancy.—Dr. Henry Hun, of Albany, records, in *The American Journal of the Medical Sciences* for July, 1884, a case of tubal pregnancy, in which the cyst burst at about the twenty-fifth day, and the patient died. Dr. Hun obtained the specimen, and after having rendered the embryo transparent by oil of cloves, carefully studied it and made an accurate drawing of it. In this case the ovum was in the right Fallopian tube and its corpus luteum was in the left ovary. In a considerable number of cases of tubal pregnancy the corpus luteum is found in the ovary of the other side, and it is very possible that this unusual origin of the ovum may be the cause of the tubal pregnancy, for if the tube bends over and reaches the opposite ovary it will be apt to be so bent and twisted that the ovum will meet with great difficulty in passing through it, or, if an impregnated ovum passes across the pelvis and enters the tube of the other side, so much time will be consumed in its journey that it may develop to such a size before it gets to the uterus that it cannot pass through the tube, and will continue its development in this organ. This is the only cause which can be assumed in Dr. Hun's case, for there was no occlusion of the tube by tumors, bands of adhesions, or displacement of the uterus, as are sometimes found in these cases; neither was there any great fright or emotion experienced at or near the time of sexual intercourse, which, in a number of such cases, has appeared to cause the extra-uterine pregnancy.

Unilateral Swelling of Hysterical Hemiplegia.—Dr. S. Weir Mitchell records, in the July number of *The American Journal of the Medical Sciences*, three cases of hysteria, in which there was unilateral increase in bulk at or near the menstrual period, and also at other seasons, after emotional excitement, and he has been unable to find elsewhere any narration of similar cases. Whatever conclusions we may reach as to the immediate cause of the unilateral differences in size, which Dr. Mitchell has here described, it is at least clear that they are under the influence of the nervous system, and vary with the causes which also increase or lessen the analgesia, or give rise to chronic spasm. Beyond this Dr. Mitchell can as yet hardly go. Most probably, he thinks, it will be found that in many unilateral hysteric palsies a like phenomenon exists, and has merely escaped attention because of being the least prominent in a group of symptoms. At all events, it adds another to the large group of resemblances which so closely relate organic to hysteric hemipalsy.

Treatment of Ingrowing Toe-nail.—Professor Petersen removes the whole of the soft parts down one side of the nail, extirpates the nail itself, from antiseptic motives, and, after arresting bleeding by pressure, dresses the wound rapidly with oxide of zinc and cotton-wool. Fourteen days' rest in bed, with the foot raised, generally suffices for cure, and the contraction of the cicatrix prevents a relapse to the old condition. Professor Petersen prefers general to local anæsthesia, on account of the troublesome bleeding afterward; and for the same reason he does not approve of Esmarch's bandage in this operation.—*Cin. Lancet and Clinic*, June 14, 1884.

Massage in the Treatment of Stricture of the Urethra.—The difficulty of passing a sound in stricture of the urethra following gonorrhœa depends, in the majority of cases, not so much upon the simple narrowing of the urethra itself as upon proliferation of the connective tissue in the surrounding parts. This hyperplasia of the connective tissue occurs in irregular patches about the urethra in such a way as to render the canal tortuous, thus increasing the difficulty of passing an instrument to the bladder. Dr. Géza v. Antal relates a number of cases (*Centralblatt für Chirurgie*, June 7, 1884) in which he succeeded in inducing absorption of this hyperplasia by massage. The duration of each sitting was from eight to ten minutes, and the massage was repeated daily. Massage of the pendulous portion of the urethra presents no difficulties, but that of the membranous and prostatic portions is possible only through the rectum. Internal massage by means of the repeated introduction and withdrawal of a sound, as recommended by Bardinet, does not commend itself to the author. It is only possible in those cases in which the stricture is already permeable, while v. Antal's method is of especial value precisely in those cases in which the urethra will not admit of the passage of a bougie. Further than this, internal massage acts only upon the thin layer of tissue immediately surrounding the urethra, while the external method causes the entire hyperplasia to disappear. The author thinks that in many cases massage will be used in preference to urethrotomy.

Rabies in Birds.—M. L. Gibier has succeeded in inoculating hens with the virus of hydrophobia and then reinoculating rats with cerebral matter taken from these diseased birds. The rats so treated presented all the characteristic symptoms of rabies; microscopic examination of the brains of the inoculated hens showed the presence of the specific micrococcus.—*Centralblatt für Chirurgie*, June 7, 1884.

Death following the Extraction of a Tooth.—Dr. Zakharevitch relates two instances of young men, both physicians, dying from the results of the extraction of a molar tooth. One died ten days after the operation from osteomyelitis, and the other six days after from osteitis of the inferior maxilla and septicæmia. It was found that the dentist had not been careful in cleaning the forceps used by him. The author, moved by these accidents, recommends the employment of antiseptic tooth-pulling. He advises washing the inside of the cheeks with soap and water, and then with a two per cent. solution of carbolic acid. After the tooth has been extracted the mouth should be again washed with the carbolic solution and the tooth cavity filled with a wad of cotton charged with iodoform powder.—*Raccoglitore Medico*, June 20, 1884.

Treatment of Slight Burns.—Dr. Cramer treats slight degrees of burns by means of compression. He applies a layer of wadding and over this an elastic bandage, so as to make firm and even pressure over the whole of the injured surface. By this means the subcutaneous capillaries are emptied in a measure of their blood, and inflammation and exudation of serum are prevented. The compression is to be maintained from three to fifteen hours, according to the intensity of the burn, and then a less degree of pressure kept up until new epidermis has formed.—*Memorabilien*, May 14, 1884.

Treatment of Sweating of the Feet.—The following method of treatment for this unpleasant condition is endorsed by Dr. G. Cramer in *Memorabilien* of May 14, 1884. The patient must wash his feet thoroughly in a two to five per cent. solution of carbolic acid, at first twice a day, then once a day, and finally two or three times a week. After the bath he is to put on clean stockings, sprinkled inside and outside with a powder composed of two parts benzoin, three parts salicylic acid, and ninety-five parts magnesia. The shoes must also be sprinkled inside with the powder. The stockings, when taken off, should be allowed to soak for twelve hours in carbolized water, then dipped in lye, and washed. In this way the bacteria which cause the skin affection and the consequent abnormal secretion of sweat are destroyed. Without this thorough disinfection, Dr. Cramer maintains, a cure of the affection is impossible.

The Apyretic Form of Typhoid Fever.—Dr. Brothier has collected several observations, which show that in certain cases the characteristic lesions of typhoid fever may be found in patients whose temperature has always remained normal. In spite of the apparent mildness of the disease, hemorrhages, perforation, and other complications are liable to occur. The symptoms are those of the ordinary form, with the exception that they are less marked, and that the temperature does not rise above the normal standard. It is very important to keep the patient in bed, and the diet must be carefully regulated.—*Jour. de Méd. et de Chir. Prat.*

Reunion of Divided Nerves.—Nerve-suture is often unsuccessful, especially in those cases in which a portion of the nerve has been excised, the tension causing the sutures to cut their way out. For this reason Dr. A. L. Rava, of Kieff (*Centralblatt für Chirurgie*, June 7, 1884), has discarded this method, and instead simply brings the divided ends of the nerve so that they overlap, and then ties them together. He has found by experiments upon more than a hundred animals that the conductive power of the nerve is perfectly restored. After exposing the nerve-sheath, and before dividing it, he passes two catgut ligatures beneath it, and ties them tightly enough to prevent slipping. The nerve is then divided, and the two ends, after flexing the limb so that they may overlap, are tied together. After the expiration of from six to twenty months, experiments were made to test the conductivity of the nerves, and in every case the muscles responded readily to central irritation of the nerves. In some cases he divided two nerves and reunited them in crossed fashion, so that the peripheral end of one nerve was attached to the central extremity of the other. Then, after allowing sufficient time to elapse for union to occur, he found that central irritation of one nerve was followed by a response in the muscles attached to the peripheral extremity of the other nerve with which the first had been united. This was conclusive proof that union between the two divided nerves was perfect. The author believes that his method will be found of especial utility in those cases of gunshot wounds and the like in which there has been a considerable loss of nerve-substance, and which are precisely the cases where suture of the divided ends is impracticable. In operations also in which a number of nerves or a plexus has been divided, the various ends may be tied together without regard to preserving their separate identity, in the expectation that the functions of all the wounded nerves will be restored.

Miliary Aneurisms of the Mucous Membrane of the Stomach.—Dr. Gallard reports (*Gaz. Hebdomadaire*) the case of a man, forty-eight years of age, who was admitted into the hospital in a state of extreme prostration, caused by repeated hemorrhages from the stomach. There was anorexia, and pain in the epigastric region, but no local or general disease could be made out. The patient died after a few hours, and at the post-mortem examination an aneurism of the size of a bean, situated near the cardia, was found to have given way. Gallard has observed two other cases of the same affection, and thinks that the so-called essential hæmatemesis is generally caused by the rupture of a small gastric aneurism.

Left Inguinal Colotomy for Imperforate Rectum.—Dr. W. H. Haynes, of New York, records in the July number of *The American Journal of the Medical Sciences* a case of inguinal colotomy. One procedure in the treatment we do not find discussed elsewhere in detail, namely, that of opening up a passage at the natural site for the canal, either simultaneously or subsequent to the operation of opening the gut. When the two operations are to be performed at the same time, the first or inguinal opening would be in the nature of an exploratory operation, and should be made small so as to admit of immediate closure, and return to the peritoneal cavity after a passage had been secured at the natural site. If this latter be not secured, then the opening could be enlarged and made to serve the purpose of an artificial anus in the abdominal wall. The advisability of this procedure, however, is at present in such a doubtful state that only the experience of a number of operators can determine it. Of the few cases so far undertaken in this manner that Dr. Haynes can find recorded, his own is the only one that survived the second operation. Dr. Haynes' single experience, though successful, does not lead him to advise this procedure, since the object of it will, during the early years of its life, be dependent on the exceedingly diligent and constant attentions of others whose affections and services, though the closest, are not to be depended on, as was demonstrated in his case. If the second operation be subsequent to the first, the patient will have a double annoyance, or be under the necessity of having a third operation performed for the closure of the opening first made, which is not unattended by danger to life or of doubts as to the result; and perhaps be under the necessity of having to have it reopened, owing to neglect in the proper after-treatment of the new canal in the natural site. Whereas if one is satisfied with having saved life in a manner which numerous cases testify is not unenjoyable or full of discomfort, as used to be maintained, all dangerous risks of subsequent operations are avoided, there will be no more dependence on others' services than is natural, and many sources of distress will be obviated.

THE MEDICAL RECORD:

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CHOLERA AND THE CABINET.

THE approach of cholera along the great routes of European emigration to the Northern ports, and the ever-threatening presence of yellow fever along the lines of commercial intercourse between tropical countries and the Southern ports, places the United States this season in a peculiarly dangerous position with reference to those foreign pestilential diseases. So eminent an authority as Koch is reported to have stated, after personal examination of cases at Toulon, that the disease is genuine Asiatic cholera, and of the most unmanageable type, and that it would spread everywhere. This statement is in accordance with our own convictions, as stated in a previous article, in which we took occasion to urge our health authorities, and especially those of the large seaport towns whither emigration tends, to take immediate steps both to effect thorough sanitation and to vigilantly watch the current diarrhœal affections. As to yellow fever, no predictions can be made; it is a summer pestilence which is ever at our doors, and only awaits favoring conditions to invade our Southern seaboard cities. Of this, however, we are reasonably certain, viz.: that the United States is threatened with two foreign foes, the most fatal to public health and national prosperity of any known, both of which it is in the power of a properly organized and equipped sanitary service to prevent. The progress of cholera since our last article confirms our prediction that we are imminently threatened with an outbreak of this Oriental plague, and we urgently advise all local boards of health to organize their methods and forces as if in the very presence of the epidemic. We repeat what we then said, and with added emphasis, that no intelligent health authority will rely on our present quarantines to prevent the introduction of the germs of that disease into this country. If the epidemic is rendered in any sense harmless, and is brought under any proper control, it will be by the vigorous and vigilant action of local boards of health. We are gratified to notice that the New York State Board has issued the excellent memoranda prepared by its late Secretary, Dr. Elisha Harris, and that other State Boards have taken similar action.

In this approaching conflict with a foreign foe, more dangerous to the health and prosperity of the people than a European army, it is pertinent to inquire what is the attitude of our Government toward this national scourge? With the first rumor of cholera in Toulon, the Governments of Europe summoned their Boards of Health to prepare regulations and to take immediate measures to prevent an invasion of the epidemic. Among those brought into the service of their respective States, we notice the names of the eminent sanitarians Koch and Pasteur, of Brouardel and Prouse, of Buchanan and Carpenter. But what action has our Government taken to protect the country now on the eve of invasion by two of the most terrible scourges known to the human family? Though it has in its service a National Board of Health, composed of experienced physicians and sanitary experts, the duty of which is, according to the statute, "to obtain information upon all matters affecting the public health, to advise the several departments of the Government . . . on all questions submitted by them," we cannot learn that the advice of this Board has been sought in this great and pressing emergency, on any question relating to the approaching epidemics, by any department of Government. It appears that the Cabinet had a meeting on Saturday, and "it was decided to take prompt measures to prevent the introduction of cholera into the United States; the State and Treasury Departments will act in conjunction in enforcing the regulations to be prepared." What member of the Cabinet is sufficiently familiar with the latest discoveries of science and the teachings of experience in the control of cholera to prepare these "regulations," does not appear. In the Cabinets of Europe no one has been found competent to prepare "regulations" to meet the demands of modern science in the prevention of cholera, and hence those Governments at once called to their aid their several National Boards of Health, and submitted to them all questions relating to the prevention of the epidemic. But with an assurance peculiar to the Yankee nation, our Cabinet ignores the branch of the public service constituted by law its adviser on all matters pertaining to the public health, and single-handed grapples with and settles, to its own satisfaction, questions of science which the foremost medical men approach with special care and caution. If we may judge of the character of the "regulations" in course of preparation by the daily bulletins from the Capitol, or from the President's Proclamation, we should infer that the Cabinet had consulted some antiquated authority—a resident of Venice in the fifteenth century. As yet the Government has proposed no measure at all adequate to the emergency, and is evidently entirely unaware of its duties and its obligations. Its reliance seems to be on daily bulletins issued to the Associated Press and a proclamation by the President.

Well-meaning as undoubtedly these efforts of the Cabinet are, we venture to suggest that they are altogether unworthy the age and the occasion. If no better counsels prevail in the Cabinet, cholera will invade our shores and spread far and wide, except as it is stamped out in localities by energetic and enlightened boards of health, and the money appropriated by Congress will melt away, leaving no record of great achievements in the prevention of the epidemic.

We make these remarks in no captious or cavilling spirit, but with a painful consciousness that in the struggle among nations to combat this common foe of the human race, our Government lags far behind. It enters upon a warfare discarding the very arm of the public

service created for the occasion, and fully qualified to give it the highest degree of success in the field of conflict. Much as we lament the occurrence of a great epidemic, which leaves only misery, ruin, and death in its path, we still recognize the fact that every such devastation brings us nearer to the golden era when no contagious or infectious disease will be allowed to travel along the highways of commerce and human intercourse. The yellow fever epidemic of 1878 was a national calamity, but it did more to organize a system of sanitary service in this country than would a century of agitation by simple agreements and appeals. Six years of freedom from epidemics has created an indifference to health organizations which has, in many instances, ripened into actual hostility to their existence. It requires other great epidemics to restore these organizations to the public confidence and perfect their methods of work. That these epidemics will come, as great public educators, at proper intervals, until our system of sanitary government is perfected, we need not doubt. We look hopefully forward to the time when sanitary science, thoroughly and intelligently applied by national, State, and municipal governments, will eliminate from our mortality records the names of all contagious and infectious diseases.

THE TREATMENT OF DIARRHŒA.

A CONSIDERATION of the commonest diseases acquires a special interest at different times. At present as we are in the midst of the heated season, with cholera just on the edge of the horizon, it may be of interest to discuss such a familiar subject as the treatment of diarrhœa. All recognize that a diarrhœa is simply an expression of a certain derangement of the gastro-intestinal tract. To interpret and remove the cause should be the first rational effort of treatment. Now as the vast majority of gastro-intestinal disturbances are produced by indigestible food, a diarrhœa is very frequently at the start a conservative process induced by nature to get rid of such an offending mass. In the efforts to achieve this object a catarrhal inflammation is often set up. The idea of treatment should be to so expedite the removal of the foreign substance as to save the intense irritation involved in nature's unaided efforts to accomplish this end. In these days, lobsters and green apples, clams and cucumbers, are among us. Their digestion is frequently assisted by ice-cream; nearly always by large quantities of ice-water. Just as the unfortunate stomach is trying to get warmed up to its difficult task, its temperature is suddenly and greatly lowered by a deluge of ice-water. This is repeated so frequently that finally the injured viscus gives up in despair and passes the unchanged material along to the intestine to get rid of it as best it may. It is fortunate for the patient if the doctor, in his zeal to check the naturally induced purging, does not suddenly lock up the bowel, and in it the offending matter that is causing all the trouble. There is a popular idea that a diarrhœa should not be stopped too suddenly. As there is nearly always a grain of truth somewhere to be found underlying a popular delusion, so this idea doubtless rests upon the fact that an intestinal discharge due to irritating masses of food, suddenly checked by a heroic dose of opium, may be followed by inflammation of the bowels and peritonitis. When such a source of irritation has been removed, a diarrhœa cannot be checked too quickly. Indeed, further treatment is frequently unnecessary. The elimination of indigestible substances can be accomplished by various agents. All irritating laxatives must be avoided. A few grains of calomel finely triturated with a little bicarbonate of soda and sugar of milk often does very well. A small dose of calomel if triturated finely enough, will answer all the purposes of a large amount. Many physicians prefer castor-oil or some of the preparations of rhubarb for cleaning out the bowel. The secondary astringent effects of these drugs are beneficial. It is well to combine with them a small quantity of one of the preparations of opium. After the irritating cause of a diarrhœa has been removed, the different astringents can be used, according to the preference of the practitioner. Out of a very large number from which to choose, the sub-nitrate of bismuth in large doses is probably the least harmful and most effectual. It checks any acid fermentation, and soothes and constringes the mucous membrane.

While improper food is a preponderating element in the diarrhœa of summer, impure water and foul air introduce into the system noxious ingredients that are frequently irritating to the bowel. It is a common experience of medical students to contract a diarrhœa from staying in the dissecting-room, which ceases when they stop working upon the cadaver. A conservative process of elimination is here instituted that probably saves them a fever. Animal and vegetable refuse matter in the streets, wakened into active fermentation by the hot sun of summer, may act the same upon the layman as the dissecting-room does upon the students. Some persons seem to be peculiarly susceptible to this form of poison, and correspondingly quick to throw it off by a diarrhœa. The treatment of this form of intestinal derangement is obviously to remove the patient from exposure to the foul air, when recovery will readily take place. Mild astringents may be needed to hasten this result. Occasionally persons in debilitated condition, in consequence of the heat and impurity of air so frequently found in the city in summer, seek to relieve a continual irritation of the bowels by a change to the purer air of the country. But if the air is purer, unfortunately often as much cannot be said of country water. In fact, many people leaving town in a sound condition fall victims to diarrhœa before many days' sojourn in the country. The uncomfortable proximity of the cess-pool to the well, and the defective means of ridding the premises of sewage, destroy the good effects of many a rural visit. The sanitary condition of numbers of farm-houses and country hotels is far from what it should be. If the visitor does no more than contract a diarrhœa in many of these places he will be fortunate. Of course a simple change in the character of drinking water often produces a slight diarrhœa, aside from any animal or excess of vegetable matter it may contain. If a looseness of the bowels persists, however, after treatment by ordinary astringents, the patient had better quickly change his place of summer recreation. The valuable account of the sanitary condition of health resorts, appearing in the report of the National Board of Health for 1882, affords interesting reading on this subject.

We have thus seen that a diarrhœa is primarily a conservative process of nature indicating its efforts to eliminate some disturbing element in the economy, and that during the present season, indigestible food, bad air, and impure water, under the debilitating influences of high temperature, are most frequent causes in its production. Any looseness of the bowels must always be treated directly in reference to the agent producing such condition.

In an article on another page of this number Dr. Chapin has called especial attention to the fatal effects of great heat in largely increasing the mortality from infantile diarrhœa. As shown by his statistics, susceptibility to a high temperature is much greater in early life than in adults.

In conclusion, the laity should have impressed upon them the great importance of attending at once to any looseness of the bowels at this time. A diarrhœal condition of the intestine is a favorite developing place for the comma-shaped bacillus that Dr. Koch is just now finding in the bowels and dejections of cholera patients. Every possible means should be taken to avoid affording a favorable soil for this bacillus, in case it finds its way to our shores. It is certain that it will not stay long if it finds a limited field for its development. The possibility of such an invasion is suggested by the fact that a ship has lately arrived in lower quarantine from Marseilles, laden with a cargo of wool.

MEDICAL CHARITY IN THE SOUTH.

We publish elsewhere a communication from Dr. Sheardown, of Knoxville, Tenn., in which he goes over the familiar ground of the abuses of medical charity. It is interesting as showing the state of things in the smaller cities throughout the West and South; and also because the author makes some suggestions as to remedies.

Dr. Sheardown is a trifle one-sided in his description of the status of medical charity. It is to be remembered that a large amount of medical service is tendered for the sake of learning or teaching. Medical students and young practitioners must be educated and must learn their art practically. They are, therefore, glad to work in hospitals and dispensaries for nothing. In smaller cities and towns, to be sure, where medical colleges do not exist, this factor does not come in to so great an extent.

We think that it would be better also that the profession earn less money, rather than gain the reputation of being hard-fisted, and always demanding the *quid pro quo*. We say this while fully aware that Dr. Sheardown has in the main presented the question correctly.

SOME PRACTICAL FACTS REGARDING ASIATIC CHOLERA.

As to its nature and mode of prevention.—Asiatic cholera requires for its development, first, a specific germ of poison; second, a proper soil for the poison to grow in. We may not be able to keep away the germ by quarantine, but we can destroy the soil by disinfectants.

"Excrement-sodden earth, excrement-reeking air, excrement-tainted water," these are for Americans the causes of cholera.

Cholera attacks the most insalubrious places in a city in succession. Hence every man can choose whether he will live in a nidus for the disease or not.

The poison of cholera exists in water, and wet soil chiefly, also in food, and in the air near infected spots only. It has a very short reach. It is infectious and portable, but not contagious in the ordinary sense. Hospital attendants, nurses, and doctors, if careful, are but little more liable to the disease than others living in the same locality.

Koch's cholera bacillus, if really a pathogenic agent (which has not yet been proved), is only one of the factors necessary to develop cholera.

Maritime quarantine is of use in preventing cholera. Inland quarantine and sanitary cordons are of no value. To keep clean is the best internal quarantine.

The best disinfectants for cholera are carbolic acid, the zinc and copper salts, and corrosive sublimate.

There are no specifics against the attacks of cholera, except perfect domestic and personal cleanliness, temperate living, and leaving the infected spot.

The French have an old "preventive of cholera" which runs as follows:

> "Tiens tes pattes au chaud,
> Tiens vides tes boyaux,
> Ne vois pas Marguerite,
> Du choléra tu seras quitte."

The prevalence of typhoid fever furnishes a fair indication of the extent to which cholera would spread if it reached a city. Such is the conclusion of English observers. There is very little typhoid in New York City now.

Persons living in low-lying parts of a city or town are the most liable to cholera. The inhabitants of high flats, properly plumbed, are safe.

Panics over cholera, such as occurred at Toulon and Marseilles, show ignorance as well as cowardice. Modern sanitation can hold cholera in check.

The *mortality from cholera* does not average over fifty per cent. It is generally less toward the close of an epidemic. The mortality is less in those treated in hospitals (in England). The mortality rate varies somewhat with each epidemic.

The *duration of a cholera epidemic* in a given community is several months, unless it is "stamped" out by sanitary measures. It may go away and return again the next year. In any limited locality it expends its force in two to three weeks.

Of individual cases, the duration, if fatal, is about two and one-half days, if non-fatal, about nine days. The period of incubation of cholera is from two days to a week.

Diagnostic points.—Painless, profuse diarrhœa should excite suspicion. A case showing such symptoms as non-feculent, very copious, watery stools, of a rice-water character, early cramps, quick exhaustion, low temperature, pinched facies, should make the physician very suspicious. If cholera were present in the locality his diagnosis could be positive.

Points in treatment.—Epidemic cholera is generally preceded by a painless diarrhœa. This, if attended to at once, can be easily cured in ninety-nine per cent. of the cases. Hypodermic injections of morphine, and the internal use of opium, aromatics, and astringents, are indicated here. In the collapse stage of cholera give ice-water and ice, but be careful in the use of stimulants.

Watch the pulse to see if they affect it. Horner's anti-cholera mixture, recommended by Hartshorn and Bartholow, may be used before or at the beginning of the stage of collapse.

℞. Chloroform,
Tinct. opii,
Spts. camph.,
Spts. ammon. aromat .....āā f ʒ jss.
Creasote..... gtt. iij.
Olei cinnamomi..... gtt. vij.
Spts. vini gall..... f ʒ ij.

M. Sig.—Gtt. x. to xx. in ice-water every five minutes.

A hypodermic injection of morphine is a most effective remedy for the diarrhœa and cramps.

Cholera specifics do not exist. Oxygen, saline venous injections, chloride of sodium drinks, warm baths, calomel, camphor, venesection, have all failed.

TIGHT CESSPOOLS, THEIR DANGERS AND REMEDIES.

We so frequently receive letters like the subjoined, that we have concluded to answer once and for all, at least for the present, in our pages:

Long Island, June 19, 1884.

Dear Sir: May I ask a favor at your hands? The water-closets in my house discharge into a cesspool of about two thousand gallons capacity. This is of brick, well cemented, and supposed to be tight; it is closed by a stone slab and has no ventilation. Its contents are pumped out and put upon the land as often as once a month in the summer, and in winter, when full, say about once in three months.

In my water-closets the bottled chlorides are freely used, but I have come to suspect that the quantity used is not sufficient to disinfect the cesspool. The arrangement of the plumbing, soil-pipe, etc., I believe to be good.

Should this cesspool be treated with additional disinfectants? If so, how often, and when? When full, or when just emptied, or more frequently? Can you also give me an idea what quantity of, say a saturated solution of copperas, or anything else which you can recommend as better, should be considered enough for one application? I mention the strong solution of copperas because I am familiar with it, and always keep the solid salt by the barrel on hand for frequent use about my premises, stable, etc. It is cheap and in convenient form for solution. Is there anything better? How about carbolic acid, quicklime, sulphur, etc.?

Yours very truly, G. T. L.

The readers of The Record need scarcely be told that tight and unventilated cesspools, with no outlet for their gases except into the bath-tubs, water-closets, wash-basins, and kitchen-sinks, which empty into them, must rank among the most dangerous of all "modern conveniences" that can be devised by the perverse ingenuity of man. They are far more dangerous than open privies, open cesspools, and more or less ventilated sewers. The gases which are formed, and the germs which are bred, in darkness and heat, with little or no oxidation or renewal of air, are among the most concentrated and virulent; far more injurious and destructive than ordinary sewer gases, which always have so many outlets to the open air. A closely sealed cesspool is a many multiplying foul air-chamber or foul gas-retort. Apart from the ordinary unsavory and harmful products of the decomposition of vegetable and animal matters which takes place there, all the discharges from patients sick with measles, scarlet fever, diphtheria, summer diarrhœa, dysentery, or typhoid or intermittent fever, if there happens to come any, also become more virulent. Yet just such cesspools are among the most common additions to the largest and finest country houses, and are regarded as the nicest things for country hotels and summer boarding-houses. They are very numerous in the most fashionable watering places. It is not uncommon, in some half-primitive and half-civilized places, to find out-door privies for the male boarders and up-stair water-closets for females, the pipes from which empty into a tight cesspool. In order to save a few hundred feet of drain-pipe these cesspools are generally placed very near the houses. Every observant person has seen them within ten feet, more or less, of parlor or bed-room windows, with huge and even splendid flower-pots put over their covers, in order to hide any trace of their existence. Of course, these hotel and boarding-house cesspools cannot be emptied during the summer season, when the gases and germs in them become abundant and virulent, and have no escape except into the rooms from which the materials for their growth and composition came. When consulted about such matters it is well to advise that a new cesspool be built far away from the house. It should have a large man-hole, which should always be left open for free ventilation; then such great quantities of fresh earth should be thrown into it from time to time, that not only all fluids and moisture should be neutralized and absorbed, but all its foul contents should be covered by at least six inches of fresh absorbent earth. In short, the cesspool should be converted into a great and wholesome earth-pit. Thus not only will the whole contents be kept odorless and healthy, but all the waste materials of the house will be changed into an excellent and inoffensive fertilizer, which can be used in gardens as well as fields. Every open out-door privy can be changed, in the same simple and inexpensive way, into an outdoor earth-closet by throwing in, if necessary, one or several or many cart loads of fresh earth, until a dry surface of earth alone is visible, and all offence to the eye and nose is obviated. Then fresh earth should be thrown in every day, sufficient to hide and disinfect the daily deposits. We are sure that this earth treatment of cesspools and privies would pay in the greatly increased quantity of excellent and inodorous fertilizers which would be gained; for earth permeated with the fluids and gases of decomposition is almost as rich as garden mould.

It requires no stretch of imagination to suppose that it would pay to have earth thrown from time to time in every horse-manure pit, and over the contents of every stable- and barn-yard. Horse, cow, and cattle manure would thus be ripened and mellowed. The great waste of good material by evaporation from the heat of the sun in the hot months, and by the washing and soakage of rain in wet times, would be largely prevented. An enthusiastic hygienist says, every country barn- and stable-yard could be converted into a wholesome and cleanly earth-yard, where every one could almost always walk with comfort and decency. The nasty smells of stablemen, and cow and cattle herdsmen would also be largely done away with. Many of the diseases which arise from the discharges of sick men, horses, and cattle would be pre-

vented; the occupations of stable and cattle men, and even sweet milkmaids, would become much more cleanly and wholesome. The amount of good and savory fertilizers that would be gained would be almost incalculable. The air of every country house, village, and small town would be greatly improved. Places naturally wholesome, but polluted by thoughtless man's filthy habits, would regain their primitive healthfulness. We have heard of pleasant and productive farm-yards which were hollowed and graded toward the centre to prevent all fluids from running off to waste. The bottoms were stamped down hard to make an impervious base, over this about six inches of loose earth was thrown, and above this the first layer of the droppings of horses or cattle or both were thrown, also to the depth of six or more inches; then a fresh layer of earth, say three inches, and so on successively, layer by layer of earth and manure. Such farmers always had much more and better fertilizers than their neighbors. Their barn and stable yards were always pleasant and wholesome, their stable and cattle men and women were always more tidy, sweet smelling, and cleanly. The milk and butter was better, and spoiled less readily; almost all infectious human, horse, and cattle diseases were prevented or quickly stamped out, and that without other scientific or chemical aid.

News of the Week.

The Greely Arctic Expedition.—The reports from this expedition show that Americans can live for two years in perfect health in the arctic region, and that the use of brackish water does not produce scurvy.

A New Insane Asylum for Iowa.—A new asylum for the insane is to be built at Clarinda, Iowa. The sum of $50,000 has been appropriated for beginning the work.

Journalistic Changes. — Dr. T. F. Rumbold has given up the editorship of the *St. Louis Medical and Surgical Journal*. Dr. Le G. Atwood becomes editor in his place.

Dr. R. B. Stover has retired from the editorship of the *Atlantic Journal of Medicine*, leaving it in charge of Dr. Henry G. Houston.

Dr. Wesley C. Norwood, a prominent physician of South Carolina, and a medical writer of note, died at Cokesburg, S. C., June 17th, at the age of seventy-eight. Out of a handsome competence he gave magnificent gifts of money to Wofford College, South Carolina, and Adger College, South Carolina.

Dr. Kirkbride's Successor. — Dr. John Bassett Chapin, Superintendent of the Willard Asylum for the Insane, at Willard, N. Y., has been unanimously elected by the Board of Managers of the Pennsylvania Hospital for the Insane to succeed Dr. Thomas S. Kirkbride, deceased, as Physician-in-Chief and Superintendent of that Institution. The Board is fortunate in having secured so able and accomplished a physician as Dr. Chapin.

The Yellow-fever Germ not Discovered.—Some months since considerable interest was excited by the announcement that Dr. Freire, of Rio Janeiro, had detected the presence of the organism causing yellow-fever in soil taken from graves of persons who had died from the fever, and that he had succeeded in communicating the disease to rabbits and guinea-pigs. But (*Medical Press and Circular*) in a communication since forwarded to the English Government from the island of Barbados an account is given of the results of a number of control experiments made with soil taken from the graves of persons who died of yellow-fever in the epidemic of 1881, and from open fields on which no manure had been used. Previously sterilized chicken-soup impregnated with any of these moulds and kept at the ordinary temperature usually became turbid in a few hours, and by the second day had assumed a bright yellow color. Summing up their results, Messrs. Moxly and Harrison say that they can discover no difference between a micrococcus from a grave and one from a garden.

The Legality of Cremation.—One of the English courts has just decided that it is illegal to cremate a body on which a coroner had determined to hold an inquest. The body in question was that of an illegitimate infant, and the decision seems an eminently natural and proper one.

A Grand Fair in Aid of the London Hospitals is, it is said, to be undertaken under the auspices of the Health Exhibition. The hospitals in question are, many of them, in great need of pecuniary help.

A Medical Drama.—A drama, called "Sister Grace," written by a doctor, and played for the benefit of the East London Hospital for Children, has just been presented at the Avenue Theatre, London. The play introduces hospital life and incidents. The binaural stethoscope made its first appearance on the stage.

The Death of Dr. Moreau, the celebrated alienist, at Paris, in the eighty-first year of his age, is announced. He was a pupil of Esquirol, and had been attached to Bicêtre and La Salpêtrière.

The Epidemic of Small-Pox, which has for some time been prevalent at Liverpool, has now attained alarming dimensions. Traffic, except for residents, is in certain streets suspended, and the public institutions for the reception of small-pox patients are full to overflowing. It is stated that the Local Government Board have severely censured the local authorities, and have called upon them to immediately provide suitable hospital accommodation for infectious cases. Small-pox is also still very prevalent in London, there having been over a thousand cases in the hospitals.

Excessive Child Mortality in New York City.—*The Lancet* estimates that the mortality rate among children under five years of age in New York City is 90.3 per 1,000 living children, while in London it is only 65.1 per 1,000, a difference of thirty-nine per cent.

The Yellow Fever Germ.—The Panama physician who claims to have discovered the yellow fever germ, to have cultivated and inoculated it, passed through this city last week on his way to Paris. He was interviewed by a member of the daily press, who procured a picture of the hypothetical germs and produced them before the admiring laity. As shown in wood-cuts, they certainly look like very ordinary forms of fungus.

Dr. Octave Pavy, Late Surgeon to the Greely Expedition, was a man of curious character, and had led a varied career. He was born in Havre, France, where he was educated, and where much of his youth was spent. Early in life he accompanied a French expedition to Lady Franklin Bay, and spent several years in the polar regions. He fought in the Franco-Prussian war. At its close he came to America, where he resorted to various expedients for a living. He finally studied medicine, and began practice in 1877. He was a member of the Howgate expedition, and when this failed he remained at Disco Island, off the coast of Greenland, until he joined the Greely party.

Dr. William Fruitnight, one of the medical staff of Bellevue Hospital, died suddenly, July 21st, at the residence of his brother, Dr. J. Henry Fruitnight, from thrombosis of the brain. The deceased was but twenty-five years of age. He was graduated from the Bellevue Hospital Medical College in 1880, and since that time had been attached to the medical staff at the hospital.

Professor Virchow has begun a series of popular articles on cholera in *Die Nation*, a weekly political journal of Berlin. He condemns the French for carelessness, and takes a conservative view as to the real significance of the cholera bacillus.

Medical Novelists.—Dr. William A. Hammond announces that he has four novels written, and intends hereafter to publish two a year. He states that he would rather be a novelist than a doctor, and thinks that it is time medical men, in a literary way, give some results of their rich and peculiar experience with human nature.

The Illinois State Board of Health held its quarterly session on July 2d. The Secretary in his report says: "There have been fewer complaints made direct to the Board, of unprofessional conduct, and fewer cases of this kind otherwise coming under observation, during this quarter than ever before in the history of the Board." Taking up the subject of public health, the Secretary refers to the prevalence of small-pox in England, and the probability that it will become more prevalent in this country. He advises the printing and distribution of the school vaccination order.

Pasteur's Experiments on the Prevention of Rabies.—Further experiments have been made by M. Pasteur on the prevention of hydrophobia by inoculation. He has experimented upon 57 dogs, 19 of which were mad, and 38 bitten by them under uniform conditions. Out of these 38, half had been previously inoculated. Those not inoculated died of unmistakable hydrophobia, whereas the 19 others are apparently in the possession of perfect health.

Death of Dr. Cæsar Henry Hawkins.—Dr. Cæsar Henry Hawkins, the well-known English surgeon, who had been Sergeant Surgeon to her Majesty Queen Victoria for a number of years, died in London, July 21st, at an advanced age. Dr. Hawkins was born near the close of the last century. After having served for a few years as Lecturer on Anatomy at the school in Great Windmill Street, London, he was appointed surgeon to St. George's Hospital, where he lectured on surgery, and rapidly became known as one of the most learned practitioners of Great Britain. He held this position for thirty-two years, in the meantime becoming a Trustee of the hospital, until 1861, when he resigned and was appointed consulting surgeon, a post which he filled until his death. He was also for several years an Examiner in Surgery at the University of London and a member of the Court of Examiners of the Royal College of Surgeons, of which he was twice elected President. He served at different times as President of the Royal Medical Society of England, the Royal Chirurgical, and the Royal Pathological Societies. On the death of Sir Benjamin Collins Brodie, Sergeant Surgeon to Her Majesty, Dr. Hawkins was appointed to fill the vacancy in the Queen's household. He was the author of a series of lectures on tumors, and furnished a number of other valuable contributions to medical journals.

Some Advanced Views on the Subject of Medical Education.—The Chicago Medical Society, says the *Medical Age*, has lately been devoting considerable of its attention to the subject of the regulation of medical practice in the State of Illinois, and a committee, recently appointed to place the matter in shape for consideration, has just made its report. The committee hold that no degree of the doctor of medicine should be deemed valid if conferred by any medical college on any one who shall not have been previously examined, as to his general education, by a committee of the school of practice which said student proposes to follow. They believe also that no medical college should hereafter be incorporated unless it have an endowment fund of not less than $150,000 free of all claims. They further believe that no person should be permitted to enter upon the practice of medicine unless he has been previously examined by a board of seven examiners on anatomy, physiology, chemistry, obstetrics, gynecology, surgery, practice of medicine, hygiene, State medicine, psychiatry, therapeutics, materia medica, and pharmacy. This board of examiners should be chosen from the various schools of medicine, in proportion to the number of practitioners of each school.

Cholera in the United States.—There have been five importations of Asiatic cholera into this country, viz., in 1832, 1848–49, 1854, 1865–66, 1873.

A Veritable Electrical Girl.—*A propos* of the Lulu Hurst nonsense, which has lately been amusing New Yorkers, Dr. Ch. Féré publishes editorially in the *Progres Médical* of July 5th the account of a genuine "electrical girl." He describes the case as one of the "electric neurosis." The patient, a woman twenty-nine years of age, had been under observation for three years. She was thin, anæmic, had a very dry skin, and suffered from nervous anorexia and ovarian tenderness. She appeared to be charged more or less with positive electricity. Her hair when stroked would crepitate, and sparks could be produced. With her fingers she could repel light (electro-positive) objects and attract others (electro-negative). She was in fine, in the condition of one who has been slightly charged with electricity. This evolution of electricity was much greater when her emotions were excited, and M. Féré appears to think that the force is evolved by Mme. X——, and not that it accumulates through friction in locomotion. In damp weather,

the phenomena are much less prominent, and when this is the case, the patient experiences lassitude and malaise. Static electricity given at this time makes her feel much better. M. Féré considers the condition the result of some neuropathic disturbance. He cites several somewhat similar cases reported by Drs. Girard, Mussy, Hosford, Floquin, and others.

Some of the Work which Cholera has Done.—In 1871 there were 300,000 deaths from cholera in Russia; in 1873 there were 16,000 deaths in Poland; in 1872–73 there were 140,000 deaths in Hungary; in 1872–73 there were nearly 27,000 deaths in Prussia; in 1865–67 there were 143,000 deaths in Italy. In Paris the mortality from cholera has been as follows: in 1832, 18,654 deaths; in 1849, 19,184; in 1853–54, 8,096; in 1865–66, 12,082; in 1873, 885. In England, in 1849, the deaths from cholera were 70,000. In 1817 the army of the Marquis of Hastings in India lost 9,000 men in twelve days from Asiatic cholera.

Progress of the Cholera in Europe.—At date of writing the cholera is continuing its ravages at Toulon and Marseilles with unabated violence. The deaths at the former place average daily between 20 and 30; at the latter between 50 and 60. The number of cases in the hospitals at Toulon averages about 200. The record for July 21st at the St. Mandrier Hospital was: admissions, 14; deaths, 2; under treatment, 122. We may infer that the epidemic is not a specially virulent one. Cases of Asiatic cholera are reported at Arles, at Nismes, and at Vienna. Deaths from "cholerine" are reported at Lyons. Deaths from sporadic cholera have been reported at Paris, but it is doubtful as yet if genuine cholera has reached that city. The French authorities have wisely decided not to undertake any inland quarantine against the disease, but to employ suitable inspection. Quarantine at the frontiers of Italy and Spain appears to have been carried out with a ridiculous, if not absolutely harmful stringency. Koch has presented to the mayor of Toulon a memorandum regarding the methods for preventing cholera. The substance of it is as follows: 1, cholera is propagated by people, and is generally communicated by contact with human beings or clothes; 2, lead a very temperate life, in eating as well as drinking; 3, see that your food comes from no infected locality—cook it well; 4, see that the water for drinking and washing is pure, boil it if need be; 5, avoid large gatherings, fairs, etc.; 6, disinfect choleraic evacuations with carbolic acid; 7, the apartments of cholera patients should be left uninhabited for six days; 8, persons who have been in contact with cholera cases should wash their hands in soap and water and carbolic acid; 9, laundresses should not take the linen of patients till after its disinfection; 10, the clothes of patients should not be transported until after disinfection; 11, funerals should be as plain as possible.

The French Government has decorated Koch with the cross of the Legion of Honor.

The National Dental Association held its fourth annual session in Washington, beginning July 22d. The President, Dr. R. B. Winder, of Baltimore, presided. We would suggest for future discussion the question, Why dentists always convene in hot weather?

The Importation of Rags into this Country from infected ports in Europe has been forbidden by the Government.

Suicide of Dr. William M. Dorran.—Early on the morning of July 22d Dr. William M. Dorran, of Mount Vernon, N. Y., shot himself in the head. He was dead when discovered. Dr. Dorran was born in Ireland, and was fifty-two years old. He graduated from the University Medical College in 1863. He left nothing telling why he had taken his life, but it is supposed that he became despondent over continued ill-health from a disease which he contracted in the army, while stationed at Fort Scott, Arkansas.

New Crematories.—Companies have been organized in Pittsburg, Pa., and Buffalo, N. Y., for the purpose of building crematories. They will conduct cremation on a business basis, and doubtless will find enough "cranks" to keep their furnaces supplied.

Peptonizing Milk—A Correction.—In Dr. Smith's letter on "The Feeding of Infants," etc., Medical Record, July 19th, p. 80, second column, it should read: "Mix a powder consisting of five grains of, etc.," instead of five grammes.

Final Decision Regarding the United States Medical College.—The Court of Appeals has declared that, according to the intent of our legislation, the words "literary or scientific college" in the amended general statute do not cover medical colleges, respecting the organization and management of which there is a special statute. The legal defect under which the "United States Medical College of the City of New York" labored from its birth not having been cured by the nicely planned legislation of 1882, that institution, says the *Times*, has returned to the nothingness out of which it sprang.

Is it True?—It is generally considered better not to wash in public the linen that is encumbered with adventitious, sordid, and germ-breeding products. Alleged peculiarities in the social habits of the American Medical Association doctors, however, have lately been receiving not only a national but a European laundressing. We clip the following from the *Medical Press and Circular*:

Lack of Refinement in the American Medical Association.—A resident of Washington writes to the New York *Medical Journal* as follows: "The usual disgraceful performances took place at the receptions. Mrs. L—— generously opened her beautiful house, and provided as fine a table as Demenet could serve. She was rewarded by having men stalk in (hats on their heads) from the front room to the dining-room, where they fought like wolves for places at the tables, overturning piles of plates, breaking her expensive ornaments, and soiling her rugs with pools of tobacco-juice."

We are very confident that the description thus given is a gross exaggeration. We have met a number of gentlemen who attended the Washington receptions and heard no such reports. We can refer also to the authority of the Texas *Courier-Record* that the members in question were a "grand, grave body of men," whose lives gave proof of the immortality of the soul, and suggested nothing of prandial rapacity and ill-timed expectoration. Washington correspondents should be a little more careful in criticising their medical colleagues.

Reports of Societies.

AMERICAN OTOLOGICAL SOCIETY.

Seventeenth Annual Session, held at Grand Hotel, Catskill Mountains, N. Y., July 15, 1884.

The American Otological Society held its seventeenth annual meeting at the Grand Hotel, Catskill Mountains, Tuesday, July 15, 1884.

Morning Session.

In the absence of the President, Dr. C. H. Burnett, Vice-President Dr. J. S. Prout called the Society to order.

The first business was the appointment of a Business Committee, consisting of Drs. F. B. Loring, E. W. Bartlett, and A. Alt.

Dr. Andrews, of Philadelphia, was invited to a seat in the Society.

Dr. H. Knapp, of New York, read a paper

ON THE INDICATIONS FOR OPENING THE MASTOID PROCESS, BASED ON SOME RECENT OBSERVATIONS.

In it he described three cases, which were cited as illustrations of some of the conditions in which this operation was of value. The first case was one of acute tympano-mastoiditis, in which paracentesis of the tympanic membrane had been tried without affording any relief. The mastoid process was trephined, a large amount of pus removed, and this was followed by rapid recovery. The second case was one of chronic suppurative tympano-mastoiditis, in which there was severe half-sided headache. In this case relief followed the operation. The third class of cases, of which an illustration was cited, was sclerosing mastoiditis. In this case the tympanic membrane was intact, there was constant severe headache. Complete relief was afforded by the operation.

The operation, as performed by Dr. Knapp, consists in making an incision one centimetre behind the insertion of the auricle, the point of election for perforating the bone being the pit of Dessarenne. Chisels alone are used in making the perforation. The direction of the opening should be parallel to the course of the external meatus. Especial stress was laid on the use of sponges in the cleansing of such wounds. The advantage being that no fibres are left in the part.

In acute suppurative otitis the immediate removal of the pus is sometimes sufficient to cause a cure. Syringing is not employed unless there is old suppuration or profuse suppuration sets in a few days after the operation. Where it is wished to have union by first intention, the edges of the wound are brought together with the continuous suture. This is intended after operations for merely congestive sclerosing processes, or when in non-suppurating otitis, the cranium has been opened.

For washing the wound, weak solutions of chloride of sodium or boracic acid are employed.

Before taking up the discussion of this paper, the paper of Dr. J. A. Lippincott, of Pittsburgh, Pa., was read, entitled,

A CASE OF MASTOIDITIS INTERNA CHRONICA WITH SCLEROSIS—TREPHINING—RECOVERY.

A young lady nineteen years old was first seen March 15, 1883, at which time she complained of moderately severe pain from which she had suffered several months. Her previous health had been good. The watch could be heard when placed against the ear. A quantity of wax was removed from the canal and the tympanic membrane found to be red and irritated. The removal of the wax did not cause much improvement in hearing, which was one-thirtieth in the right ear. The left ear was normal. Slight catarrh of the naso-pharynx was found. A solution of boric acid and borax was ordered to be instilled; this caused some relief. But five weeks later, the suffering greatly increased and the pain was referred to the region of the middle ear and to the mastoid process. It was also felt in the whole side of the head. There was a great deal of swelling over the process and below it. Examination of the ear showed that the membrane was not congested, but the typical light-cone was absent and the anterior two-thirds of the membrane showed a silvery lustre. The Eustachian tube was pervious. There was slight elevation of temperature. Leeching and poultices were applied externally, and calomel and a febrifuge administered internally. This caused rapid improvement.

The note of the case made April 28th was as follows: Continuous dull pain in the ear and mastoid process. The swelling has entirely disappeared. Hearing two-thirtieths. Tuning-fork on vertex heard best on the affected side.

During the following months the pain continued to increase in severity and was especially felt in the mastoid region. Hearing steadily diminished. There was no swelling, and cerebral symptoms were absent. The treatment consisted in the use of blisters, and other applications, incisions and anti-neuralgic and alterative remedies internally.

On March 20, 1884, an incision was made behind the auricle under ether, and an opening, seventeen millimetres in depth, was made with Buck's drill. The osseous tissue was hard and ivory-like. A carbolized tent was inserted and a poultice applied.

After the operation, the pain was greatly relieved and entirely disappeared in a few weeks. Shortly after the operation, a return of the pain was produced by exposure, but this was at once relieved by the application of an ointment of the yellow oxide of mercury and belladonna.

On July 8, 1884, the patient was entirely free from pain and the hearing was six-thirtieths.

Dr. A. H. Buck, of New York, thought that it was not desirable to attempt to obtain union by first intention. He had always believed that the good results of the operation were largely dependent on the irritation and drain which it produced.

Dr. Knapp said that the only case in which he had tried to secure healing by first intention was in one in which the lateral sinus had been opened.

Dr. Charles J. Kipp, of Newark, N. J., had come across a number of cases in which, while there was no external evidence of disease, carious bone was found after separating the periosteum, and cited an illustrative case.

Dr. Samuel Theobald, of Baltimore, Md., considered the administration of constitutional remedies a very important part of the treatment, often obviating the necessity for operation. He had obtained excellent results from the use particularly of iodide of potassium and the biniodide of mercury. With these he had used inunctions of mercurial ointment and the oleate of mercury.

Dr. Sexton, of New York, exhibited a number of photographs and briefly described the cases which they illustrated. He differed from Dr. Knapp in the conclusions which he had drawn. He did not think that pain alone was a sufficient ground on which to base a diagnosis of involvement of the mastoid process.

Dr. J. A. Andrews stated that one of the indications by which he was guided in opening the mastoid cells was the occurrence of swelling of the optic disk or optic neuritis. When this appeared in a case in which there was restlessness, and pain, he performed the operation.

Dr. A. Matthewson, of Brooklyn, stated that in many of the fatal cases of aural disease, post-mortem examinations failed to reveal any evidences of mastoid disease.

Dr. A. H. Buck described the method which he pursued in these cases. They can be divided into two classes: in one the mastoid disease develops in a well

person; in the other it develops in one who has had for some time a purulent discharge from the ear. If the disease supervenes in an old case of ear trouble, tenderness, redness, and swelling of the glands will probably be absent, although serious disease of the mastoid process is present. The next question is whether or not there is adequate provision for the discharge of matter. If there is not the operation should be performed. In the acute cases he considered it good surgery to operate on the mastoid process.

The paper was discussed further by Drs. Jones, Seely, Pooley, Mathewson, and Fryer.

Dr. A. H. Buck, of New York, in a paper

ON THE USE OF LARGE DOSES OF IODIDE OF POTASSIUM AND IODIDE OF SODIUM IN THE TREATMENT OF CASES OF RAPID LOSS OF HEARING

supposed to be due to syphilitic disease, reported several cases which he had collected in studying the literature of the subject. In two of these, benefit had followed anti-syphilitic treatment. He added to this a detailed account of a number of cases treated by himself with large doses of the iodides, in none of which had a cure been effected and in only one or two had temporary benefit been obtained. He had given the iodide in doses as large as five hundred and twenty-five grains per diem, without any beneficial effects. He thought that this was probably due to the fact that the disease had destroyed the organs essential to the perception of sound, and although the source of pressure which had caused this injury might be removed, the destruction had been such that the organ did not regain its functions.

Dr. Seely stated that his experience had led him to the conclusion that if benefit did not follow moderate doses of anti-syphilitic remedies it was not to be expected.

Dr. Buck had reached the same conclusion.

Drs. Mathewson, Jones, Knapp, and Andrews also took part in the discussion, and reported cases similar to those described by Dr. Buck in which the results of treatment had been negative.

Adjourned.

Evening Session.

The first paper read at the evening session was by Dr. Seely, of Cincinnati, O., on

THE TREATMENT OF SUPPURATIVE OTITIS MEDIA WITH JEQUIRITY.

After referring to the failure of the various plans of treatment in this affection, he stated that in order to obtain the best results, it was necessary to fulfil the following conditions: first, cleanliness; second, rendering and keeping the Eustachian tube patulous; and third putting the naso-pharynx into a healthy state. This last point is frequently entirely ignored. The mucous membrane of the cavity of the tympanum frequently passes into such a condition that it can only be relieved by changing it into cicatrical tissue; a condition similar to that found in tracheomatous inflammation of the conjunctiva.

This latter affection has recently been treated by inducing a violent inflammation by means of the infusion of jequirity. For the past year or two Dr. Seely has been treating certain cases of long-standing suppurative otitis media, by inducing inflammation with the solution of jequirity which has been used in the treatment of similar diseases of the eye, and he considers this plan of treatment of value under certain conditions, which he formulated as follows: 1, where there is extensive destruction of the membrana tympani; 2, where there is a great amount of thickening of the mucous membrane, thus rendering other plans of treatment futile or tedious; and 3, where there is a patulous Eustachian tube, a condition for regulating the inflammation.

Dr. J. J. B. Vermyne, of New Bedford, Mass., read the next paper, which was entitled

DISEASE OF THE ETHMOID, THE CONSEQUENCE OF CHRONIC CATARRH OF THE NASO-PHARYNX—EXOPHTHALMOS,

in which was described the case of a young lady of sixteen, who consulted the author on account of a slight protrusion of the right eye. The protrusion was forward and downward and had existed for some time. The eyelids were not œdematous. There was no dilatation of the veins, the conjunctivæ were normal and pain was absent. Ophthalmoscopic examination showed that the optic disk was slightly elevated and that the vessels of the retina were distended. There was slight hypermetropia on the right side, but vision was normal on both sides. Headache had been noticed for a few days before she came under observation. The general health was good with the exception of a chronic naso-pharyngeal catarrh, which had existed for eleven years and which had followed a severe attack of scarlet fever. This was particularly marked on the right side. The movements of the right eyeball were not interferred with. There was slight diplopia on awakening in the morning, but this continued only for a short time. A neoplasm in or around the nerve was suspected and the treatment directed accordingly. In a short time the patient entirely recovered with the exception of the protrusion of the eye. A further consideration of the case led the author to think that possibly the symptoms might be explained on another supposition than that of a neoplasm. A careful examination was again made, and a hard immovable nodular tumor, extending from the upper internal corner of the eye to the internal canthus, and which evidently was connected with or originated from the os planum, was found. The symptoms were then referred to the naso-pharyngeal catarrh and suitable treatment instituted. The case was considered to be one of retention tumor, similar to one which was reported by Dr. Knapp, in 1876, to the International Ophthalmological Congress. This opinion was largely based upon the fact that there had been frequently observed a peculiar appearance of the eye, which was compared to a lobster eye. The speaker referred to the fact that Dr. Knapp's case had been successfully operated on by the chisel: a plan of treatment which Dr. Knapp had advised in all cases of this kind whether of exostosis or of retention tumors. Another case of Dr. Knapp's, reported in the April number of the *Archives of Otology*, was referred to. The above operation was performed, but the patient died from traumatic meningitis. Disease of the osseous walls of the frontal sinus was found after death. In reviewing the conclusions drawn by Dr. Knapp from the last case, the speaker though it proper to ask what constitutes a comparatively healthy pneumatic, and whether some participation of the bone in the neighborhood of the tumor can not with reason be suspected? And also, considering the lesser danger which might attend simple mechanical distention of the bone, whether an explorative puncture with a trocar would not become imperative, instead of being unnecessary, as stated by Dr. Knapp, and whether in tumors of this kind, when not endangering the eye and not of inconvenient size, it would not be better to let them alone as has been advised by other authorities?

Dr. Vermyne also read a paper on

MYXOFIBROMA AT THE BASIS CRANII, CAUSING BLINDNESS, AND SEVEN YEARS LATER, COMPLETE DEAFNESS BY DESTRUCTION OF THE LABYRINTH.

The patient was first seen in the early part of 1876, dimness of vision and fatigue of the eye being complained of. Vision $= \frac{12}{xx}$. There was slight congestion of the optic disk and of the retinal vessels. Three months later, severe headache and optic neuritis appeared. Under the use of the artificial leech and the administration of large doses of bromide and iodide of potassium

the patient improved. The patient passed from under observation on account of the statement to the patient's parents that there was probably a cerebral tumor, and that the improvement was likely to be only temporary.

Five years later the patient was again seen, and secondary atrophy of both optic disks was found. In 1873 she became deaf; but six weeks' later she could hear almost as well as before. After this the hearing gradually disappeared. The patient died in May, 1874, eight and a-half years after the first observation.

At the autopsy, a tumor measuring six centimetres in length, four centimetres in width, and two centimetres in thickness was found occupying the left inferior occipital fossa. The left half of the cerebellum had been compressed to one-third of its normal size. The consistence of the cerebellum was increased, and both it and the cerebrum were anæmic. A considerable amount of fluid was found in the ventricles. The tumor in its growth had impinged upon the petrous portion of the temporal bone of the left side, and had caused the entire destruction of that portion of it between the posterior wall and the tympanic cavity, which had been opened.

The speaker considered that the first symptoms of the tumor were those referred to the eye; that in all probability the tumor originated from the dura mater, and that the effect upon sight and hearing was to be attributed entirely to interference with the circulation from mechanical pressure.

Dr. Charles Kipp reported two cases of a similar nature, in one of which the frontal sinus, the ethmoidal cells, and the sphenoidal cells, were filled with innumerable polypi.

A CASE OF EPITHELIOMA OF THE AURICLE

was reported by Dr. Charles J. Kipp, of Newark. The growth developed in a young man aged nineteen, and had been growing for one year. It involved the concha and closely resembled a mass of granulation tissue, but it was harder than this, and this condition led to the diagnosis of granuloma. It was removed, the wound healed, and the case passed from under observation, so that its subsequent history could not be obtained. The microscope showed the growth to be made up to a great extent of epithelial cylinders, imbedded in a very vascular, fine fibrillar tissue.

Dr. Kipp also exhibited a cavernous fibro-liponia which he had removed by excision from the auricle of a man thirty-one years of age.

Dr. L. Howe read a paper entitled

HÆMATOMA AURIS—ITS TREATMENT WITH ERGOT.

The condition had occurred in a sane woman aged twenty-eight, without apparent cause. Hypodermic injections of ergot were tried with the effect of greatly diminishing the size of the auricle.

Dr. Samuel Sexton read a paper on

THE INFLUENCE OF DENTAL IRRITATION ON THE EAR.

A number of plaster casts were exhibited, showing the condition of the teeth in cases in which the ear symptoms were found to be due to the caries or other trouble with the teeth, and in which relief was only obtained when these difficulties were corrected.

The following papers were read by title: Dr. Todd's, of St. Louis, Mo., entitled, "Necrosis of the Right Labyrinth; Total Facial Paralysis on the same Side; Partial Recovery;" Dr. Burnett's, of Philadelphia, Pa., on "Reflex Aural Phenomena from Naso-Pharyngeal Catarrh; Objective Noises in and from the Ear;" and Dr. H. N. Spencer's, entitled, "A Simple Device for the Treatment of Nasal and Post-nasal Inflammations, and on the Importance which Attaches to such Conditions of Inflammation as they are Related to the Ear."

Professor F. E. Clarke read a paper in which he asked for a reliable test for hearing, by which the difference between hearing and feeling might be determined; for a method by which the hearing might be developed or improved, and whether injury might be done in these cases by loud noises, etc.

The paper was referred to a committee of three, of which the President of the Society was to be chairman.

The Society then went into executive session.

The new members elected were: Dr. E. D. Spear, Jr., Boston; Dr. John Vanduyn, Syracuse, and Dr. S. O. Richey, Washington.

OFFICERS FOR THE ENSUING YEAR.

President—Dr. C. H. Burnett, Philadelphia; *Vice-President*—Dr. J. S. Prout, Brooklyn; *Secretary and Treasurer*—Dr. J. J. B. Vermyne, New Bedford, Mass.; *Committee on Publication*—Dr. J. J. B. Vermyne, Dr. C. J. Blake, Dr. O. J. Green; *Committee on Membership*—Dr. John Green, Dr. H. G. Muller, Dr. H. O. Moyes.

The next meeting to be held at the same place as the American Ophthalmological, and on the day preceding its meeting.

The Society then adjourned.

THE PARIS ACADEMY OF MEDICINE.

Stated Meeting, June 24, 1884.

M. Alphonse Guérin, President, in the Chair.

(Special Report for The Medical Record.)

The Academy having been called to order, M. Fauvel, at the request of several of the members, made a short report upon

THE CHOLERA IN TOULON.

He had already had occasion, before the Consulting Committee on Hygiene of France, to express the opinion which he held that the present epidemic was not Asiatic cholera. All the facts in connection with the case go to prove that the disease is of local origin, and is due to the herding together of a considerable number of troops placed under defective hygienic conditions. These same conditions have before now, notably in England, caused outbreaks of epidemics, attended with great mortality. Such epidemics are ephemeral, continuing and subsiding along with the conditions which have given occasion to them. The mode of origin of the epidemic in Toulon, and its subsequent course, have nothing in common with our ideas of Asiatic cholera. Whenever this dreaded disease visits a large community, it strikes with great fury and advances with extreme rapidity, so that it reaches its maximum of intensity within a few days, having then attacked all those who are susceptible to its influence.

M. J. Guérin asked that M. Fauvel might be a little more explicit in his report, so that the Academy might not be dependent upon the daily papers for information concerning the Toulon epidemic.

M. Fauvel regretted that he would not be able to give any more detailed information until the next meeting. He could state, however, positively, that the epidemic was declining.

M. Bouley announced that MM. Roux and Straus had left for Toulon, and would bring back some valuable documents bearing upon the origin and nature of the disease there prevailing. These documents would be laid before the Academy when the question of the cholera epidemic came up for discussion.

M. Bucquoy then related a case of

FARCY,

occurring in a coachman, nineteen years of age. The patient, who had been ill for a fortnight, presented all the symptoms of typhoid fever, except that there were no rose-colored spots nor any gurgling on pressure in the right iliac fossa. A little later, M. Bucquoy noticed a small round ulcer on the external surface of the right leg, and an abscess a little higher up on the limb. With-

in a short time the patient had a severe chill, and this was followed by swelling and redness about the right ankle. Suppuration soon appeared within the joint. Several of the other articulations became similarly affected, the patient rapidly lost strength, and finally died. Just before death the body was nearly covered with an eruption of bullæ. The author inoculated an ass with fluid taken from the body of this patient, and the animal sickened with farcy, thus showing conclusively the nature of the disease from which the young man had suffered. It was ascertained afterward that the patient had slept in a stable in which was a horse affected with glanders.

A communication to the Academy from Madame Paquereau, regarding the interests of

MIDWIVES IN ALGERIA,

was then reported upon by M. DE VILLIERS. He declared himself in favor of recognizing the midwives practising in that colony.

The Academy then adjourned.

THE BIOLOGICAL SOCIETY OF PARIS.

Stated Meeting, June 21, 1884.

M. PAUL BERT, PRESIDENT, IN THE CHAIR.

[Special Report for THE MEDICAL RECORD.]

THE Society having been called to order by the President, M. BOCHEFONTAINE read a communication on the

ACTION OF SALICYLIC ACID UPON RESPIRATION.

He had observed the effects of the drug upon healthy individuals and those suffering from typhoid fever. The respiratory movements became more regular under its influence, probably by reason of its action upon the medulla oblongata.

M. DÉJERINE had recently been studying the

PERIPHERAL NERVE-LESIONS IN LOCOMOTOR ATAXIA,

and presented a report of his investigations to the Society. The man, a patient in M. Vulpian's service, had a sclerosis of the posterior and lateral columns. There was complete anæsthesia of both lower extremities, with the exception of a small area on the inner surface of the right knee, where sensation was preserved. M. Déjerine found marked changes in all the peripheral nerves except those supplying the area of preserved sensation. The lesions were less marked in the cord than in the nerves. The author insisted upon the importance of this localized neuritis in the symptomatology of ataxia.

M. DUMONTPALLIER related a case of

INDUCED BILATERAL HALLUCINATIONS.

The subject was an hysterical female who had been hypnotized. While in the somnambulistic state, a card was placed perpendicularly between the eyes so as to divide the field of vision into two parts. A pleasant image being presented to one eye and a disagreeable one to the other, the impressions thus conveyed to the hemispheres were reflected back to the corresponding halves of the patient's countenance. These impressions persisted even after the patient was awakened, the two sides of the face expressing the opposite sentiments of joy and grief. M. Dumontpallier believed that he was the first to produce these suggestions to the brain by influencing the retina alone.

M. GLEY had endeavored to repeat the experiments of M. Aphanasieff in the

TRANSFUSION OF PEPTONIZED BLOOD.

He had at first made use of peptones of German manufacture, but had found them too impure for this purpose. He had, however, succeeded in arresting coagulation by means of a liquid obtained by the washing and maceration of a pig's stomach.

M. BEAUREGARD described the

HEART OF THE SPERMACETI WHALE,

which he had recently had an opportunity to examine. It measured nearly three feet in length by a foot and a half in width, and was of an oval shape. The right auriculo-ventricular valve had three segments, the left had four. The sigmoid valves were without any nodules. The bone of the heart was absent. The heart of the spermaceti whale would thus appear to be intermediate between that of the ordinary whale (balæna) and the dolphin. Another point worthy of mention was that the walls of the left heart were no thicker than those of the right.

M. P. BERT remarked, regarding the equality in thickness in the walls of the two sides of the heart, that this was as it should be physiologically, since in the whale the blood was to be propelled horizontally and not upward. One could easily understand that it would require a stronger heart to pump the blood upward into the head of a giraffe than forward into a whale's head.

M. OKOROVITZ then read a note upon

IDEOPLASTY,

or the physiological realization of ideas.

This was followed by some further remarks by M. BERT upon

ANÆSTHESIA FROM DILUTED CHLOROFORM VAPOR.

He agreed with M. Aubean, who had read a communication upon the same subject at the preceding meeting of the Society, that the best mixture was one of eight parts of chloroform to a hundred parts of air. This mixture caused death in a dog in three hours; but if the strength was reduced to six per cent. the fatal termination was delayed for nearly seven hours. Although man bears chloroform better than the dog, M. Bert thought it advisible, nevertheless, after anæsthesia had been produced by the eight per cent. mixture, to reduce the strength somewhat. The author stated further that when an animal had once fallen into the most profound anæsthesia, it would absorb no more chloroform until the anæsthesia had begun to diminish.

M. BROWN-SÉQUARD related a case of

CHLOROFORM NARCOSIS MAINTAINED FOR EIGHT DAYS.

The patient was an epileptic who had sustained a fracture of the arm, and it was consequently of paramount importance to prevent the convulsions for a time. Two of his assistants, medical men, were his authority for the assertion that the sleep had not been interrupted during the whole of this time. Simpson has recorded two cases in which chloroform narcosis was prolonged for three days.

After the election of a new member the Society adjourned.

MR. GAMGEE'S SPONGE.—Mr. Sampson Gamgee has recently shown his new absorbent sponge before the Société de Chirurgie. The description of it is as follows: "A small capsule, containing eucalyptus or other antiseptic, was enclosed in absorbent cotton; outside of this was a layer of cocoanut fibre, and outside of this more absorbent cotton-wool; the whole being enclosed in gauze. When about to be used the capsule could be broken by a blow of the fist, and the absorbent cotton become permeated with the antiseptic. He said these sponges could be made at a very trifling cost, and hoped they would come into use as a cheap substitute for ordinary sponges; they possessed this great advantage, that when required for use they were certain—however long they might have been kept—to be antiseptic: and, being so cheap, they might always be destroyed after being used."

Correspondence.

THE QUESTION OF THE FLORIDA CLIMATE.

To the Editor of The Medical Record.

Sir: The number of phthisical cases visiting Florida during the winter of 1883–84, physicians and landlords assured the writer during a stay of some months there, was greater than ever before. Gainesville may have been an exception, but certainly not if scarcity of suitable food and accommodations are a criterion. Approaching Gainesville from the direction of Palatka the country is almost an unbroken level, as it is in leaving Gainesville and proceeding toward the Gulf coast; this topographical characteristic has probably been observed by thousands who have visited Gainesville, as well as myself. There is therefore no natural fall nor inclination of streams toward any great river nor the Gulf of Mexico, no basis for natural drainage. The construction of artificial drains would, owing to the level surface, involve great expense. The Alachua Sink, a few miles distant, would from a sanitary standpoint be considered rather as a source from which the germs of malarial disease might be disseminated during the spring and autumn months, than otherwise. Practically, the throat leading to it is choked up with débris and the surrounding country overflowed by a vast and virtually stagnant pool of fresh water, into which the element of vegetable decomposition must of necessity enter, aided by absence of outlet and the flat configuration of the land. The calcareous deposits and in places marshy soil account for the inferior quality of the drinking-water in those parts.

With reference to the large number of deaths, a clergyman well known and high in the church, one who has spent many winters in Florida, and one certainly not likely to make such an assertion unless founded upon the flinty rock of fact, affirms that during his visit in Gainesville deaths from phthisis occurred nearly every day or two, and that cadavers were frequently removed by night from the hotels by the back door, in order that depressing influences might not be exerted upon patients, non-phthisical or otherwise. Darkness cannot conceal the cold white face, and the little world in the "Land of Flowers" knows that another is gone to his or her long home.

One word about Cedar Key, or Cedar Keys as it is written in not a few books and maps and so called by inhabitants. During a sojourn there the prettiness of the little place, with its row of bearing orange-trees on either side of the street, impressed itself upon my mind. There is a certain balminess in the air not noticeable on the Atlantic side. The approaches are perfectly flat, and there is no obstruction to the mild zephyrs coming over the placid waters of the Gulf or across the numerous little keys studded with palms and cedars. It is a typical spot to which Tampa, although much farther south, bears some resemblance, and if phthisical cases ought to be sent to Florida at all, which is extremely doubtful, they would certainly derive more benefit anywhere on the western coast than along the borders of the Atlantic Ocean. There is naturally considerable jealousy between rival towns eager to secure the greatest number of visitors, and doctors differ as widely in their views about Florida as a health resort as about anything else. Opinions founded logically upon reason and individual observation are not likely to be changed, and further argument upon the subject would not only be futile but would also be trespassing idly upon the valuable pages of The Medical Record. Yours very truly,

G. Halsted Boyland, M.D.

July 2, 1884.

The White of an Egg must no longer be looked upon as a simple albuminous body. Leboute, Goumoens, Scherer, and recently Dr. E. T. Reichert have found that there exists in it a globulin and a peptone.

THE ABUSE OF MEDICAL CHARITY IN THE SOUTH.[1]

To the Editor of The Medical Record.

Sir: I desire to direct your attention to the evils of charity practice as conducted in our city, and in fact not only in Knoxville, but also throughout the country at large, wishing to place myself on record as opposed to the present custom. I will also endeavor, with a few brief remarks, to suggest a more satisfactory mode of practice, both to the practitioner and to the *worthy* poor.

I take it, we all, every one of us, are practising our profession for our bread and butter, however much we may speak of the honor and glory attendant upon the practice of our truly progressive science. When we are called to a patient we expect and certainly ought to receive compensation for our services, and yet how many are there among us who have not scores upon scores of pauper patients upon their account books, and who is there among us who does not go, always go, time after time, to the same pauper patients, knowing beforehand that we will never receive any pay for our services? I am speaking now of pauper patients as a whole, including all classes — all who are recipients of gratuitous practice. It is a thankless practice, whether we treat a miserable dead-beat or a deserving pauper. To the busy practitioner the attendance on the pauper class directly takes money from his pocket, consuming valuable time, time which could otherwise be given to the better classes of his clientele. As it now is, the busy active doctor will often attend before, and give more attention to a poor patient than to a well-to-do patient, for the simple reason that he is afraid it will hurt his reputation if he fails to find time to wait upon the poor who call upon him. He is afraid some one will say, "Oh! Dr. So-and-so will not call and see me because I am poor." He does not attend the poor from a feeling of duty, for honor, glory, or fame, but simply out of policy. Policy is a fine scheme. Leave policy out of consideration, and I think a number of reputed benevolent, warm-hearted physicians would be shorn and bereft of their laurels. Mind, I do not say all. I only say a number. I know there are hundreds who are really deserving of their reputation for warm-heartedness, benevolence, and philanthropic measures; but after all is said and done, we are but human, we doctors, and we practise for dollars and cents.

Another feature is the character of treatment we render to the poor. And right here I will say I expect I will receive censure for saying that I think the majority of us neglect the poor. I do not think we are as careful and painstaking with them as we ought to be. While here and there we may find a conscientious practitioner, one who will give as much attention to a pauper as to first-class pay patients, I am free to say I do not believe that the majority of us give them the care and attention *we* ought and that *they* deserve. For I hold that no man, in any business whatever, not even the profession of medicine, will give without a *quid pro quo*, the same care, energy, thought, and attention that he would bestow for a consideration.

Perhaps before continuing further it would be well to make a division or separation into classes of those who are called charity patients. I divide them into simply two classes: first, dead-beats; second, the worthy poor. There is no need of further subdivision. These two classes include the whole mass of charity patients. Of the truly worthy and needy poor, I have this to say: it is the duty of every man, in whatever walk of life he may move, to help, relieve, and succor a poor, distressed, and afflicted brother, he being worthy. It is the bounden duty and becomes the solemn obligation of every village and county to take care of their worthy poor; but because it is right and just that the

[1] This letter is the substance of an address delivered before the Knox County Section of the East Tennessee Medical Society, May 29, 1884.

worthy poor should be taken care of, it is not right, nor is it just, that the care, labor, attention, and in many cases expenses also, necessary for their assistance and relief should be saddled upon a few only of the community, simply because they always have shouldered the burden and carried it, not only without compensation but without murmur or grumbling. To be sure, ours is a liberal profession (in more senses than one) and in all ages and all time we have ever been ready and willing to respond to the call of charity, not only with money itself but with the knowledge, skill, and understanding of treatment our professional attainments should be composed of. This is a very mistaken idea. This is all wrong. Because we have heretofore, do now, and probably will hereafter do these things is no reason why we should be imposed upon. A free horse should not be ridden to his death. Yet it is our own fault, all our own fault; the remedy lies in our own hands. We can stop this wrong system of practice if we only will do it.

I have talked with numbers of our profession, both here and elsewhere, and I have yet to find the first man who does not condemn and deplore the present system of practice, and yet all, not one exception, but express themselves as ready to attend the needy poor. To distinguish always between the worthy and unworthy poor is not easy. The dead-beats we all know (after we get through with them); those who run up a bill and employ you as long as they dare, and then apply to some one else, because, perhaps, they don't wish to lay themselves liable to be refused your services; perhaps because they are ashamed to call you in after they have made large bills. They are the ones who dodge you on the street corner, who would rather go squares around than pass your office or house. In this way they go the rounds, and every new doctor is sure to be overrun with these patients, who owe every doctor in the neighborhood, and in this way get their entire professional services free, as it takes them their lifetime to make the rounds of every physician in a city of this size. Some of them, it is true, die before they get clear around. Sad, is it not! Then, too, there is a singular peculiarity about these miserable dead-beats; it is this, they more frequently call you out at night for trifling ailments. If a farmer living in the country, he cannot spare a horse or man from the field to send after you in the day-time, but must needs wait until night, after the day's work is done, and thus entail double duty on man and beast, for he never goes himself, but sends a neighbor.

There is another important feature with this class of practice: nine-tenths of all the suits for malpractice one has or may hear of, if one takes the trouble to look them up, will be found to have been instituted by some miserable scoundrel of a dead-beat. You find them all alike. They are the men who find it cheaper to move than to pay rent, and as they move back and forth through the city leave their bills at drug stores, at the grocer's and at the butcher's unpaid. You recognize the man. You all know him. These are plain, unvarnished truths.

Perhaps I have drawn out and spread over too much paper my conception of the evils of the present system of charity practice. In treating of the remedy, which I claim lies in our own hands, I will try and be more brief, and at the same time give a clear outline of what I conceive to be the best way out of the dilemma. Let me preface by saying that, did this problem lie before any other class of men than physicians it would be quickly and readily solved. But physicians are proverbially unbusinesslike. As one of the first steps toward reform in this direction let us make out, and keep up and compare full and complete black-lists, not merely talk of it and once in several years exchange a hasty memoranda of delinquents, but regularly every quarter, say, revise the old black-lists carefully and make such additions and alterations as is necessary, bring your new list to your medical society, each man hand his list to the secretary, and have the secretary make out a complete list and furnish one to each member of the society, have them in printed form if desired. By doing this in earnest, not making a farce of it, we will accomplish a great deal. We will create more of an interest in our society. We will bind ourselves more closely together, and will naturally work more harmoniously together, and be in better shape to secure the accomplishment of our desires whatever they may be.

We should not only have *one* city physician, but *we all* should be *city physicians*, and receive pay in proportion to the amount of work we do. Another thing, in regard to the city hospital. Under the present regime the hospital practice is in the hands of a select few. If any outsider has an interesting case, which of a necessity is obliged to avail himself of hospital privileges and accommodations, he is obliged to turn over his patient to the select few. In Stillwater, Minn., a city of fifteen thousand population, where I practised some little time before removing to Knoxville, *any* physician in the city was privileged to take a patient to the city hospital and wait upon him himself. The system worked well, and is in vogue to-day in Stillwater, giving excellent satisfaction.

In several parts of the old country, in Germany, which I recall in particular, where an individual is sick, or members of his family are sick and need professional care and is unable to pay for same, he makes application to one of the town officials for aid. The official gives him an order to a physician (the applicant selecting his physician) to wait upon him, and also gives him an order to the apothecary for necessary medicines, which order must be countersigned by the physician. Then the physician and apothecary present their orders to the treasurer or proper official and are paid their bills. A certain schedule of prices being authorized by law at a certain per cent. discount from the regular fee-bill.

In some parts of Michigan, also in Lancaster, O., a similar law prevails. Other places that have this system I cannot now recall. In our own city, perhaps, the best way is, when a pauper requires medical attention let him apply to the alderman of his ward—aldermen are usually pretty well acquainted with the people of their wards (at least immediately preceding a municipal election)—and let the alderman be empowered to give an order to any physician the applicant prefers; at the same time giving an order to the apothecary for the necessary medicines, this order to be countersigned by the physician to be of any value.

If this work is considered by the aldermen as derogatory to their official dignity and position as city fathers, let the proper power be conveyed to the assessor and his deputies. If their duty is already too arduous, let there be constituted an additional Board of Poor Commissioners, one or more to each ward, with a nominal salary. But to whosoever this power be relegated, make it obligatory upon them to personally familiarize themselves, either before or immediately after giving the order, with the worldly condition and financial standing of the applicant in order to guard against imposture, and also make it obligatory upon them to keep a full record of all orders drawn, giving name of applicant and members of family, his and their occupation, and the amount of money earned by the family; by this means ascertaining whether they are worthy recipients of charity or not. Let them also keep a record of the date of application, and names of physician and apothecary whom orders are drawn upon. Make it also a duty of the physician to render a full report of each case to the Board of Poor Commissioners, all proper blanks being furnished by the city. Then let us physicians adopt a charity fee-bill; either a new one designed for this class of practice or make a certain per cent. discount from our regular fee-bill.

These are my ideas on the evils of charity practice and of the proper course of treatment indicated. If this treat-

ment is adopted and adhered to, I think the prognosis extremely favorable. But the profession must be united in its endeavors. In union there is strength. United we will make a success of it; divided we will ignominiously fail.

T. W. SHEARDOWN, M.D.

KNOXVILLE, TENN., May 29, 1884.

MORPHOLOGICAL STATUS OF THE CEREBELLUM.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I have read with considerable interest the elaborate lectures[1] delivered under the provisions of the Cartwright bequest by Professor Wilder. Having given attention to the matters with which that distinguished anatomist deals, permit me to offer some suggestions regarding a single proposition made by him which cannot, I think, be sustained. The lecturer follows the lead of a number of comparative anatomists in regarding the cerebellum as a distinct segment of the primitive group, under the name of *metencephalon*. He goes further than they in creating, as it were, a new ventricular subdivision, in order to render this classification consistent. This is the anterior portion of what all authorities have agreed in regarding as the fourth ventricle, according to Wilder the *epicœlia*.

Practically we all recognize that the cerebellum is an important segment of the adult brain; indeed, the classification of the parts of the adult brain, useful for medical students and for the localizationalist, can scarcely be made to correspond to morphological or embryological requirements.[2] I need but refer to the case of the thalamus, which is an outgrowth of the embryonic *thalamencephalon*,[3] and really one of the finest representatives of an embryonic segment which could be cited. In man and higher animals, however, so intimate has become its secondary fusion with the medullary centre of the hemispheres, that it assumes the position of an intracerebral ganglion, comparable to the lenticular nucleus and the caudate mass of the corpus striatum. So absolute is the dominion of the cerebral hemisphere over the thalamus, that the ventricular cavity of the former, in man and apes at least, encroaches on the dorsum of the thalamus a short distance beyond the caudo-thalamic groove, as if to falsify the embryonic relations of the derivative cerebral vesicle to its parent thalamic vesicle. I cite this case to show that the embryonic importance of a segment is not a proper gauge of its importance to the physiologist and physician and that therefore conversely the importance of a segment—like the cerebellum—to the physiologist and physician is not an indication that it occupies a correspondingly important place in the embryologist's calculations. To a certain extent the aims of morphological and physiological anatomy are distinct. To the comparative anatomist the pituitary body and pineal gland are of much more fundamental importance than the pyramid tract, while the physiologist discards the former and attaches the greatest value to an accurate knowledge of the latter, just as the surgeon is more interested in understanding the mechanism of the atlanto-occipital articulation than in being told by the morphologist that the *ligamentum suspensorium denti epistrophei* contains a notochordal relic. I say this with a full appreciation of the high biological importance of even unpractical facts, which, if I could attest in no other way, I needed but to refer to a few original discoveries which I have been fortunate enough to stumble across while undertaking researches in this field.

The reasons why I cannot agree in regarding the cerebellum as a primary segment, nor the *epicœlia* as a primary ventricular subdivision, are the following:

1. Primarily, the cerebellum is only the dorsal part of the wall surrounding the anterior part of the cavity of the hind brain (fourth ventricle).

2. The ventral part of this wall is morphologically continuous with and inseparable from the posterior "open" part[1] of the fourth ventricle.

3. The cephalic portion of the fourth ventricle is distinguished from the caudal portion only by the fact that in the former the roof—and the roof alone—undergoes hypertrophy, while in the latter it—and it alone—undergoes atrophy. If this fact is to constitute a discrimination between two cerebral segments, then the closed portion of the oblongata should be separated from the open portion.

4. There is at no time an indication of a boundary (of the kind found with other ventricular cavities in all higher forms) between the *epicœlia* and *metacœlia*. The *procœlia* are separated from the *diacœlia* by a constriction, the *porta Monroi*; the *diacœlia* and fourth ventricle are demarcated from the *mesocœlia* by a sudden narrowing,[2] but where is the boundary between the two divisions which Wilder makes of our old familiar fourth ventricle? It happens to widen out at the (imaginary) boundary.

5. Dr. Wilder recognizes the necessity of finding a ventral part of his epencephalic segment, and believes to have found it in the pons. The term "pons" in one sense indicates an arbitrary division; in another it is used to designate only the (apparently) transverse fibre mass which is thrown across the brain-axis like a belt. This is not a commissural mass, however. Nearly all its fibres pass to the crura cerebri, either with or without ganglionic intervention, according to the testimony of Gratiolet, Meynert, Vernicke, and Flechsig. Morphologically they are heralded in lower animals by arciform fibres which are continuations of the zonal fibre system common to the entire myelencephalon of reptiles and birds. There is hence no support to be derived from the existence of this apparent basilar commissure for Wilder's designation. This objection is strengthened by the next.

6. There is not even an approximate uniformity in the boundary of the *epencephalon*. If the extent of the cerebellum be taken as the gauge, it is almost *nil* in *menobronchus* and extremely large in man. Homologous parts of the ventricular floor fall within the *epicœlia* in man and without in reptiles. If the extent of the pons be taken as a guide, then this segment is absent in reptiles and birds, it is a narrow belt in the opossum, twice as wide in the rabbit, thrice as great in the dog, five times as great in the ape, and six times as wide (cephalo-caudad) in man.

The only indication of a cœlian monopoly on the part of the cerebellum is the tent-like projection of the fourth ventricle into the *fastigium*. Indeed, in birds—like the ostrich—it is a closed pond, communicating with the fourth ventricle by a narrow slit. But this is not a ventricular *segment*, but a *diverticulum*, like the primitive cavity of the *hypophysis* (pituitary body) or the *conarium* (*epiphysis* or pineal gland). I think this comparison suggests the true morphological *status* of the cerebellum.

Respectfully,

E. C. SPITZKA.

[1] THE MEDICAL RECORD, April to June, 1884.
[2] Cerebrum, cerebellum, and axis (or isthmus).
[3] Diencephalon (Wilder), dentencephalon.

[1] Where the roof loses its nervous character and becomes membranous.
[2] Even in reptiles.

TREATMENT OF PHLYCTENULAR OPHTHALMIA.—Dr. H. Power recommends as a local remedy in cases of phlyctenular ophthalmia an ointment commonly called Pagenstecher's, which is a combination of vaseline with binoxide of mercury, in proportions varying from one to ten, or even fifteen, grains to the ounce. This forms a yellow ointment, which in the milder forms gives scarcely any pain, but in the stronger proves sharply irritating to the eye, inducing free lachrymation. Dr. Power thinks that this preparation may be regarded as a specific for corneal ulcers.—*Louisville Medical News.*

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from July 13 to July 19, 1884.

WRIGHT, J. P., Major and Surgeon. Assigned to duty as Post Surgeon, San Antonio, Texas. S. O. 87, par. 4, Headquarters Department of Texas, July 14, 1884.

MCELDERRY, HENRY, Captain and Assistant Surgeon. From Department of the Platte to Department of the East. S. O. 165, par. 12, A. G. O., July 16, 1884.

EWEN, CLARENCE, Captain and Assistant Surgeon. Assigned to duty as Post Surgeon, Fort Sidney, Nebraska. S. O. 58, par. 8, Headquarters Department of Platte, July 11, 1884.

ELBREY, F. W., Captain and Assistant Surgeon. Leave of absence still further extended six months on surgeon's certificate of disability. S. O. 161, par. 6, A. G. O., July 12, 1884.

WAKEMAN, WM. J., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort D. A. Russell, Wyo., and assigned to duty as Post Surgeon, Fort Washakie, Wyo., relieving Assistant Surgeon Norton Strong. S. O. 58, par. 9, Headquarters Department of Platte, July 11, 1884.

EWING, CHARLES B., appointed to be Assistant Surgeon, with the rank of First Lieutenant, July 5, 1884, *vice* Middleton, promoted. Memorandum, A. G. O., July 14, 1884.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending July 19, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
July 12, 1884	2	8	55	4	187	31	0	0
July 19, 1884	3	15	50	3	167	27	1	0
Deaths.								
July 12, 1884	0	3	14	3	27	18	0	0
July 19, 1884	1	5	11	3	30	16	0	0

THE AMORPHOUS BORATE OF QUININE is a preparation highly recommended by Finkler and Prior, who have used it in the clinic at Bonn. Its advantages are that it does not irritate the stomach, and that it has a more powerful antiseptic action in the digestive tube. It is used in about the same doses as the sulphate.

CEREBRAL ANÉMIANTS AND HYPERÉMIANTS.—Curci, experimenting upon dogs by trepanning and attaching a uranometer, finds that chloral, chloroform, ether, paraldehyde, and quinine, produce cerebral anæmia; morphine and nitrite of amyl, hyperæmia. Atropine in small doses has little effect; in larger doses it is rather an anémiant.

CHLOROFORM IN THE TREATMENT OF TAPE-WORM.—Dr. J. G. Brooks writes to the *Medical and Surgical Reporter*: "I have had within the last three years several cases of tape-worm to treat, and, finding such strong objection to the large draught of medicines in ordinary use, I prescribed the following: ℞. Chloroform, ex. male fern, āā f℥ j.; emul. ol. ricini (50 per cent.), f℥ iij. M. Sig.—All to be taken at once after twenty-four hours' fast. In every case the medicine was well borne, and the worm expelled entire. In two cases I omitted the male fern, and the result was the same as when the latter drug was in combination. My object in reporting this treatment is to induce others of the profession to try the chloroform and report results. I claim for this agent a specific and rational action as an adjuvant in the expulsion of the worm. It anæsthetizes or suspends vitality, and any active purge during anæsthesia of the tænia is all that is requisite to expel it. I earnestly ask those who have cases to try the chloroform, or chloroform and male fern, as above prescribed, and report results."

IN THE TREATMENT OF SPRAINS, Dr. Brinton, in the *College and Clinical Record*, recommends that the limb is to be put into a vessel of very hot water immediately, boiling water being added as it can be borne, and kept immersed for twenty minutes, or until the pain ceases. Then put on a pretty tight bandage and order rest. Sometimes the joint can be used in twelve hours. If the trouble is more chronic, apply a silicate of sodium dressing, and let the patient walk with a cane, if the ankle be the joint affected.

THE QUESTION OF THE FEEDING OF INFANTS has been recently discussed in the *British Medical Journal* by Drs. Beatty and Davies. The latter gentleman gives the following presentation of his view of the matter. He says: "Now, as the food we are at variance about is milk in its usual state from the cow, or condensed, let us see how we stand. Dr. Beatty recommends one part of milk to three of water, I recommend two parts of milk to one of water. Now let us take the composition of milk, and then judge as to which approximates nearest in strength to the mother's.

	Woman.	Cow.	Ass.
Casein (cheesy matter) and insoluble salts	3.35	4.55	1.70
Fatty matter	3.34	3.70	1.40
Sugar of milk and soluble salts	3.77	5.35	6.40
Water	89.54	86.40	90.50
	100.00	100.00	100.00

From this analysis it will be seen at once that Dr. Beatty's is much too weak. It is estimated that a healthy woman gives three pints of milk in the twenty-four hours; therefore an infant should have at least a quart of cow's milk a day, as much must of necessity be wasted by giving it by the bottle, and I know of no reason, nor have I ever read of any, which shows that a woman's milk is weaker at first than it is in four or five months after parturition. Now, with regard to condensed milk, 'the First Swiss Brand,' that is, the unsweetened milk (the only kind that should be used), is four times as strong as ordinary milk from the cow; therefore, a tin would be equivalent to a quart of milk. I say a tin a day is about what should be given, diluted with five times its bulk of water. Dr. Beatty says he orders a teaspoonful (!) to a quarter of a pint of water, at first, and says infants thrive on it; that may be his experience, I regret to say it is not mine."

SODIUM IODIDE INSTEAD OF POTASSIUM IODIDE.—Dr. Jno. D. Mulhane, of Steubenville, O., writes, refering to the article on "Sodium Iodide," of Dr. Berg (MEDICAL RECORD, vol. xxv., p. 542): "During the past year, while physician to Gould's Tunnel Panhandle Railway, I had under my care four hundred men, white and colored. In this class of fellows you find syphilis in all its forms. At first I used potassium iodide, but noticing that the late lamented Gross, in 'Surgery' (vol. i., p. 338, 1872) was very partial to sodium iodide, I used it in one hundred and seven cases, and in not one did it produce that dryness of air-passages which follows potassium when pushed. I heartily agree with Dr. Berg. No gastro-intestinal irritation in a single case."

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Original Articles.

ADDRESS ON PHYSIOLOGY,

DELIVERED AT THE ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION, JULY 29, 1884.

BY PETER REDFERN, M.D. LON., F.R.C.S.L.,

PROFESSOR OF ANATOMY AND PHYSIOLOGY IN QUEEN'S COLLEGE, BELFAST.

(Special for THE MEDICAL RECORD.)

Mr. President and Gentlemen of the British Medical Association: I value very much the honor of having been selected to give the address on physiology and I thank you warmly for the mark of your confidence which it implies.

The great problems of life have in all time had a profound influence upon the heart and mind of man. Whatever concerns the prolongation of life, or the increase of the capacity for enjoying it, the prevention or cure of those modified vital actions which we know as disease has always interested the mass of mankind. Hence the mission of medical men—as extensive as humanity, whatever form it takes—uninfluenced by age, or sex, or country—succoring alike the orphan, the criminal, the virtuous, the poor, and the rich. The medical man is the true friend of all within his reach; he advises, instructs, befriends all alike.

There is no one to whom accurate and incessant observation is so essential. His first step is to observe and record all the healthy phenomena of life; it is his constant care to secure the most fitting conditions for their exercise; and his last effort is to note how certainly their continued action brings about their own extinction, and how often they are suddenly arrested in their course by disease.

The delicate adjustments of vital operations and the unstable physical and chemical equilibrium of living structures present such difficulties to the physiologist that thousands of years of the world's history had passed before we had learned a single fundamental doctrine applicable to all life on the globe. Yet I doubt if as great progress has been made in any science as in physiology during the past fifty years, or if such an amount of labor has been expended in the same time on any subject as has been devoted to the study of physiology in the last quarter of a century. Still all we now know may appear very insignificant in the estimation of our successors of the next generation.

Every step in physiology concerns life and health; therefore each must be made as secure as possible. I think nothing has given as great confidence and security in the advance of physiology as the demonstration that all living matter has been derived from previously living matter of its own kind, and that all living beings and living tissues have originated from fragments of previously living beings or tissues, which, when detached, carried the properties of their parents with them.

It is quite true that living bodies are continually influenced and altered by external conditions; but it is also true that conditions at least as potent tend to their return to their original state. The changes which a particular mode of life may effect in the highest type of living beings may be such as to require three generations to make a glass-blower; but it is not probable that his children would care to preserve the advantages which they had derived by inheritance from their parent's father and grandfather.

The formed materials of our tissues differ widely from the original protoplasm to which they owe their origin; but some of that protoplasm remains in each, and still possesses powers of reproduction, which, in many instances, are no less startling because of the character than of the quantity of the tissue produced in a given time. The colossal increase in size, no less than the increase in number, of the muscular fibres of the uterus required to raise the standard weight of the adult organ from one and a half ounces to three pounds, is only paralleled by the still more rapid reduction in two or three weeks of the same organ from three pounds in weight to three ounces. This happens in an organ which is often more or less dormant for years together; but in the continually acting diaphragm, the presence of an unusual number of protoplasmic corpuscles in each fibre points to the greater and more persistent activity of the change which takes place there. Observe, in comparison with its cause, the vastness of the change produced in the mode of nutrition of the uterus, when an ovum only $\frac{1}{170}$th of an inch in size has come into contact with a still smaller spermatozoon; and the not less remarkable change when this ovum leaves the uterus. The establishment of different physiological relations has been attended in the first instance by deposition and formation of tissue; in the other, by its disintegration and removal.

Changes of external conditions produce as remarkable results. Mr. Ward found ill-fed plants of the common centaury (Erythræa Centaurium) only half an inch high, with one flower, at no great distance from better fed ones four or five feet high, covered with hundreds of flowers. Without other difference than greater looseness of the texture of the soil I had plants of the common rape (Brassica napus) between five and six feet high, freely branched everywhere, and carrying leaves as large as ordinary dishes, as contrasted with others close by, only fifteen inches high, but little branched, and having few linear leaves only about an inch long. And everyone is familiar with the marvellous change wrought upon the hive bee when, from being fed on royal jelly instead of an ordinary bee-bread, it becomes a queen. Yet these naked-eye evidences of the influence upon vital activity of a change in surrounding circumstances are insignificant in importance when compared with those of which the results are witnessed daily in medical practice.

Dr. Williams showed that when a drop of weak solution of capsicum is applied to the web of a frog's foot, dilatation of the arteries and capillaries takes place and more blood circulates through the spot in a given time than before, and that from this condition recovery may take place, and the experiment be repeated time after time on the same part. But if the solution be stronger recovery will not occur, and the increased rapidity of circulation will give place to slowing and stagnation. In the first instance the life of the vessels was affected and their contractility impaired transitorily, but the stronger solution destroyed their contractility more completely and produced the phenomena of inflammation, congestion, exudation, and stasis. No matter by what external means the life of the vessel is affected, the same result follows. And if the injury be inflicted from within by adding some irritant to the circulating fluid the effect is still the same.

Mr. Lister demonstrated, in a series of beautifully-contrived experiments, the delicacy of the relations between the walls of the blood-vessels and the circulating blood—that injury of the wall of a vessel causes arrest of the white corpuscles on the injured part, with coagulation of the blood; and if the injury be considerable, it will cause complete obstruction to the circulation. Disintegration of the white corpuscles takes place, and acts as an efficient cause of the coagulation and stoppage.

On the maintenance of this nice balance of the relations between the blood and the tissue over which it flows depends the issue whether the blood shall continue to flow or not.

The rupture of the internal coat of a vessel, or the alteration of the lining endothelium by endocarditis, causes arrest and disintegration of white corpuscles at the spot. Consequently, depositions of fibrin or the formation of thrombi on the valves of the heart are attendant phenomena on inflammation of the endocardium.

And Cohnheim found that stopping the circulation for from thirty-six to sixty hours, through particular vessels in a frog, and then allowing the circulation to go on again, was attended by such exudation as occurs in inflammation. The walls of the vessels had suffered injury from the temporary arrest of the circulation, their elements seemed to have been loosened, and exudation of certain of their contents took place.

It is important to note that this is not a mere passive transudation, it is attended with an active movement of the living corpuscles through the injured wall, a movement which does not happen in the instance of the mesentery to which solution of sodium chloride of double the normal strength, which stops the amœboid movements of these corpuscles out of the body, has been applied. An inflammatory exudation is readily distinguishable from the transudation of mere engorgement by being richer in albumen and corpuscles than it, and by coagulating more readily.

Dr. Burdon-Sanderson, in his admirable statement of the results of his own observations and in reviewing our present knowledge of inflammation, has called attention to the great accuracy of Sir William Bowman's early observations on keratitis, and has pointed out that not only do corpuscular elements migrate into injured spots of the cornea, but that they accumulate upon and within pieces of dead membrane or other tissue inserted into the peritoneal cavity. And Dr. J. Hamilton found that they so completely fill the cavities of pieces of prepared and engrafted sponge that it soon ceases to be visible. Dr. Sanderson has expressed the difficulty of maintaining that the migration of corpuscles is in such instances due to an increased attraction between them and the tissues, and he concludes that we are coming back to the notions of John Hunter, who accounted for the inflammatory blush by referring it to the action of the vessels.

On the other hand, it may be suggested that the changed conditions have diminished the restraining influence of the walls of the vessels and stimulated the corpuscles to more active migration than ordinary.

The interest and importance of the relations of the circulating fluids to the elements of the animal tissues demands a further consideration of them.

The structure and action of the supply vessels of any part are doubtless very important, but they can scarcely equal in importance the relations of the tissue and blood elements where these lie quietly in contact, and mutually influence each other.

One can scarcely exaggerate the importance of the observation that the pressure impelling the secreted fluid outward in a salivary duct is twice as great as that propelling the blood in the carotid artery, from which that gland is supplied, and that a large amount of secretion is discharged by a salivary gland, on stimulation of its nerve, after the circulation of blood has been altogether cut off from it. In like manner, at the instance of a nervous impulse, a muscle similarly withdrawn from the circulating current contracts and gives out carbonic acid and sarcolactic acid, neither of which was free in it before the contraction took place. And in the gastric glands, the pancreas, and possibly in all secreting glands, the constituents of the secretions are slowly abstracted from the blood and stored in some form of zymogen until a nervous impulse suddenly causes their transformation into the active principles of the secretion and its discharge.

Thus we localize the real laboratory of the organism—the place where the work of the body is done—the spot whence nervous impulses emanate—where motion results from chemical and vital changes—where the powers operate which regulate and produce secretions, excretions, nutrition, regeneration, and reproduction.

It will be admitted that the simplest mass of protoplasm, whether plant or animal, selects all it needs for the varied purposes of its life from the more or less fluid matters within its reach; and, in exactly the same way, the tissues of our bodies select what they need from the fluid plasma in which they are continually bathed. The vessels supply a larger or smaller quantity of this fluid as the demands of the tissues are greater or less at one time than at another; but it is the business of each tissue to select, both as to character and amount, all it requires, and in this selection, no less than in the use it makes of the materials it has selected, the tissue can only be very indirectly aided by the blood-vessels.

The anatomical relations of the tissue elements to the lymph spaces, by means of which they are continually bathed in lymph, are very interesting, and have been admirably described and illustrated by Dr. Klein in his "Anatomy of the Lymphatic System" and "Atlas of Histology." Dr. Curnow has given an excellent account of the history of the acquisition of our knowledge of the lymphatic system in the Gulstonian Lectures for 1879, published in *The Lancet*. Von Recklinghausen led the way, and so many accurate observers in different countries have followed him that we now stand on very safe ground.

The result has shown that the acini, or the tubes of glands, the bundles of fibres of tendons, the layers of the cornea, fasciculi of muscles, and funiculi of nerves, are in relation with lymph spaces, or vessels more or less completely lined by endothelial cells, and occupied by lymph containing amœboid corpuscles in variable numbers. These Dr. Klein has shown to belong to the same system as the spaces between the fibres and bundles of fibres of areolar tissue, which contain here and there flattened and branched endothelial or connective tissue cells folded over the bundles, which are themselves continually bathed in lymph containing amœboid corpuscles. Similar spaces under the mucous membrane of the alimentary canal or air-passages are continuous with the cement substance between the epithelial cells, where also branched connective-tissue cells occur, together with occasional amœboid corpuscles. All such spaces communicate directly with large lymph canals, immediately succeeded by irregularly dilated lymphatic vessels furnished with valves.

The immediate effect of medicines introduced endermically is abundant proof of the rapid and free communication of the lymph of the spaces of areolar tissue with the current of the blood, while, if Dr. Creighton's observations on the absorption of fat from the intestines be confirmed, we shall have learned that the emulsified fat of chyle passes through the cement spaces of the intestinal epithelium into the lacteal and mesenteric glands, the epithelium itself discharging the function of secretion.

But there are much larger reservoirs of lymph than the spaces of connective tissue, tendon, and cornea. The great lymphatic sac of the frog, the serous and synovial cavities, and the sheaths of tendons of mammals and man are similar spaces. Von Recklinghausen was the first to witness the passage of milk and other fluids contain-

ing visible particles through the stomata of the peritoneum covering the tendon of the diaphragm into the lymphatic vessels, and the disappearance of fluids from the peritoneal sac by this means. You will all call to mind many instances of rapid disappearance of recent pleuritic and peritoneal effusions; others, where such effusions have remained undiminished in amount for weeks and months, and some in which the effused fluid after a time assumed all the characters of pus. Coagulated blood does not disappear from the peritoneal cavity, but defibrinated blood is absorbed and its corpuscles continue to live in the circulating blood.

Ludwig and Schweigger-Seidel have pointed out that the respiratory movements are the chief cause of the entrance of fluids into the lymphatic spaces through the stomata of the peritoneum, and that during the descent of the diaphragm lymph is drawn into the spaces between the tendon bundles by their expansion, and pressed on at the same time in the pleural lymphatics furnished with valves, while during the ascent of the diaphragm, exactly the opposite action takes place, the diaphragm thus playing the part of a pump.

The pleura of the intercostal spaces is also provided with stomata and is similarly related to lymphatic vessels, and as there is an arrangement of a similar kind on the surfaces and in the substance of all fasciæ and tendon sheaths, it is not improbable that the connections of a large number of muscles with fasciæ rather than bones serves the same purpose. How much of the pleasure derived from muscular exertion depends upon the promotion of the circulation of lymph about all these parts, and upon their consequent invigoration, we may never be able to estimate, but no one can question the importance even in the limbs of a free circulation of lymph.

Let us now return to the contents of these spaces. We bear in mind that epithelial cells are masses of protoplasm variously modified for secretion, protection, or for entering into the construction of the terminal organs of the nerves of special sense, and that between epithelial cells, whether on the skin, the cornea, or on mucous membranes, there are spaces occupied by semi-fluid cement, with branched connective-tissue corpuscles, and amœboid or white blood-cells. We trace these cement spaces onward and find them continuous with the connective-tissue spaces under their respective membranes and with lymphatic vessels. In the different spaces the contained corpuscles vary greatly in number, but a food-supply is always afforded them by blood-vessels in proportion to their number.

Under extensive tracts of the mucous membrane of the alimentary canal and respiratory organs, very notably in the substance of villi and around Lieberkuhnian follicles in the intestine, the spaces are crowded with amœboid or lymph corpuscles forming adenoid tissue, or when masses of such tissue accumulate in more or less spherical or pear-shaped blocks they constitute solitary glands or the glands of the patches of Peyer. All such parts are supplied very freely with capillary blood-vessels, and as Brücke demonstrated many years ago, their spaces directly communicate with unusually large and numerous lymphatic or lacteal vessels. The lacteals become almost immediately connected with the largest group of lymphatic glands in the body. The muscular and fibrous wall of the vessel opens out, and becoming greatly increased in amount forms the capsule and trabeculæ, while the cell elements of the connective tissue forms the framework of the adenoid mass we call lymphatic gland. The substance is composed of lymphoid corpuscles multiplying with a rapidity which is measured by their food-supply from capillary blood-vessels and the passing stream of chyle; while their detachment is in proportion to the amount of distention by passing chyle. The greater the amount of chyle, the greater is the number of corpuscles added to it as it passes, each corpuscle being derived both in substance and properties from a pre-existing one, or, as in the original development, from the differentiated protoplasm of the endothelial cells.

Dr. Klein has described small cells which bound the stomata of serous membranes, cover the surface near the stomata, and often extend along considerable tracts of their surface. These are smaller than the ordinary endothelial cells and germinate freely under ordinary healthy conditions, but in such unhealthy states as are induced by the presence of pieces of gutta-percha or irritating substances injected into the peritoneal cavity, they germinate with great rapidity and form large villous projections on the surface of the membrane, the newly-produced cells falling into the cavity or presenting themselves in large numbers in the adjacent lymphatic vessels.

Thus, in the same way as in lymphatic and other blood-forming glands, white corpuscles of the blood are continually formed and thrown off into the stream of chyle or lymph, so under both normal and abnormal circumstances the cells bordering the stomata and covering parts of the surfaces of serous membranes multiply rapidly, while in inflammation not only these lymphoid cells, but the branched cells of the matrix also undergo very active proliferation. The natural food-supply of such cells is derived from the blood, the amount and rapidity of circulation of which is largely increased in some stages of inflammation.

I now ask your attention to the structural relations of the walls of blood-vessels to the tissue elements. The most cursory examination of blood-glands, such for instance as the spleen and the red marrow of bones, shows an important adaptation of these parts to each other. Ordinary capillaries, which are really little more than spaces between the elements of tissues lined by endothelial cells loosely cemented together at their edges, have frequently sinuous, spindle-shaped, or angular dilatations upon them, while their walls have projecting processes directly continuous with the branched connective-tissue corpuscles of the adjacent parts, a connection which shows the close similarity of the lumen of the vessel to the spaces of areolar tissue, while the endothelial cells of the vessel correspond to the less numerous but similarly flattened endothelial cells of the spaces, and to tendon and corneal corpuscles, which cover in an equally sparing manner their respective tendon or corneal spaces. Indeed, the whole lymphatic system, with its lymph canalicular spaces and its more definitely walled vessels, is neither a new nor an added system, but a part, and a most important part, of the general vascular system of the body.

If we trace a small artery in the spleen, we see the tissue of its wall opened out into spaces occupied by lymphoid cells, a veritable mass of adenoid tissue involving the whole or part of the circumference of the vessel, and when at length the vessel ends, it empties its blood into the spaces of the pulp bounded and supported by the flattened, branched, endothelial elements of the walls the commencing veins. Where the adenoid masses, the Malpighian corpuscles of the walls of the arteries abut upon the pulp tissue there is no separation, the elements of the adenoid reticulum and those of the walls of the sinuses being continuous, while the lymphoid cells of the adenoid tissue are free to mix with the venous blood in the sinuses. Here, as in the case of the lymphatic glands, the organ is subjected to great distention after the absorption of food, which not only leads to the formation and separation of large numbers of new lymphoid elements, but at the same time the cellular protoplasmic elements of the venous sinuses become very active, take up old colored corpuscles, break them down, and set free their variously oxidated remains into the blood stream. The vascular arrangements of the spleen, at the same time as they tend to retard the flow of the blood, are no doubt highly advantageous for the completion of the changes which the blood undergoes in the organ, while the necessarily tardy flow of the blood is no doubt compensated by the large size of both the artery and the

vein, and the loss of force by the rhythmical contractions of the organ so beautifully demonstrated by Dr. C. S. Roy. Lymphatic glands also have a muscular capsule and muscular trabeculæ, but as yet we have no evidence of their having rhythmical contractions.

I cannot pass without mention the largest living mass of protoplasm in the body—the liver—at one period employed in the production of blood-corpuscles, and then half the weight of the body. Originally formed upon the vitelline veins, and subsequently transferred to the umbilical, and then to the portal vein, as each in turn becomes the recipient of the food supplies, there can be no doubt that while its function is mainly to make and to maintain the blood, its methods of action still involve great physiological secrets.

From the preceding considerations it is plain that at certain parts of the circulating system for lymph and blood, lymphoid or white blood-corpuscles are produced in adenoid tissue from pre-existing corpuscles at a definite rate. If Quincke be correct in his supposition, that the duration of the functional activity of red blood-corpuscles is not longer than two or three weeks, we have in this a measure of the required productive capacity, for in healthy conditions a balance of the absolute and relative numbers of the corpuscles is very accurately maintained.

But this does not always happen. My late esteemed teacher and friend, Dr. Hughes Bennett, in his original description of leucocythemia, pointed out that an amazing relative increase of white in relation to the red corpuscles of the blood occurs in connection with enlargement of various of the blood-forming organs, and the disease is now universally recognized. In the second case, which came under the notice of Dr. Bennett, I had the pleasure of making the examination, and of recording and sketching the microscopical characters of the blood in the Pathological Reports of the Royal Infirmary of Edinburgh. In that case the spleen, liver, and intestinal glands were all enlarged.

In this disease there is a greatly increased production of lymphoid cells in situations where there is abundance of nutritive material, and this increased formation of corpuscles is possibly attended by a conversion of fewer white into red blood-corpuscles than ordinary, thus greatly increasing their numerical disproportion.

As lymphoid cells can also be produced in large numbers in and near the stomata, and on the surface of serous membranes, it is probably from such sources that the pus corpuscles of empyema and peritoneal effusions arise. And it may be asked whether the amœboid cells, which migrate through the walls of the blood-vessels on the onset of inflammation, possess the power of multiplying on surfaces which are now supplied with a largely increased amount of blood.

This is improbable for many reasons. Actual observation of such multiplication has not yet been satisfactorily obtained. Dr. J. Hamilton, in the record of his very interesting observations on the healing of ulcers and sponge-grafting, says that he has carefully watched the exuded leucocytes, and has never seen them get larger, either by over-nutrition or coalescence. Ranvier, who thinks it probable that lymph cells are connective tissue cells set free from adenoid tissue, believes that they will neither move nor multiply, except when freely supplied with oxygen; that the free supply of oxygenated blood by the capillaries of lymphatic and other blood glands, is the means of their multiplication, and that the absence of oxygen in the lymphatic vessels stops it. He sees in the rapidity of the circulation of blood an explanation of their migrating in small numbers only in health, while on the slowing or arrest of the circulation in inflammation they migrate in large numbers, and getting beyond the reach of the supply of oxygen disintegrate and cause coagulation of the plasma. He points to the experiment of introducing fragments of phosphorus under the skin, without arousing inflammation and migration of leucocytes, as indicating that the phosphorus has taken up all the oxygen present, and destroyed the amœboid movement necessary for migration, and thinks that the effect of cold in checking exudation is due to a similar action. Whatever the influence of oxygen on the manifestation of the vital movement of lymphoid corpuscles, it is certain that lymph differs widely from blood in containing a mere trace of oxygen.

In the formation of an acute abscess, the part is hot, painful, and swelled, exudation and coagulation of the exuded matter occur with migration of leucocytes through the vascular walls; the pain becomes more severe and throbbing, and the heat greater than before; next day there is indistinct fluctuation from the formation of pus, and from this time the pain and heat lessen, and the matter makes its way by softening and degeneration to the surface. The greater heat and pain preceding the formation of pus indicate greater distention of the vessels, and greatly increased exudation; or that the larger supply of blood which increased the pain and tension had furnished the food for the more rapid generation of lymphoid corpuscles.

When in diffuse phlegmon punctures are made one day and discharge thin serous fluid, and the next day the whole areolar tissue is distended with pus, there is little room for doubt that a rapid generation of lymphoid corpuscles has taken place at that very part and produced the pus. If this happen in one instance, it is probable that in other cases, too, pus is either formed by rapid proliferation of connective-tissue corpuscles, or that it is the result of rapid generation of corpuscles from those which first migrated, and that the primary cause of this is an increase of the normal attraction of the tissue for the nutritive matters of the blood, whereby the lymph stream flows more slowly and the corpuscles drag lazily along the wall, then penetrate it and escape with the plasma in large amount at a time when the cement between the endothelial cells has softened, and the spaces occupied by it have become widened.

But whatever be the cause, let us not lose sight of the main phenomena: millions of lymphoid corpuscles have been rapidly produced somewhere, and they have been produced from pre-existing corpuscles of the same kind. It will scarcely be suggested, without evidence, that the whole circulating blood has taken on either an entirely new, or, certainly, an unwonted action, in order to supply more lymphoid corpuscles than ordinary to the particular part where we find them accumulate; and it is little less difficult to maintain that, because of some local injury, a multitude of lymphatic or other blood-glands at a distance have produced a greatly increased quantity of corpuscles to migrate into the injured spot. We know that the period when the corpuscles of blood-glands multiply rapidly, and fall off in large numbers into the circulating current, is the period of tension and turgescence of such glands—a tension and turgescence produced by an extraordinary afflux either of blood, or of both blood and chyle. We cannot dissociate, either here or anywhere else, increased activity from increased supply of nutritive material, and we have no ground for supposing that there is an increased supply of nutritive material to the blood-glands because of a distant local injury. What remains? The admission is now as full and complete as I could wish in the instance of cartilage, that whatever changes take place in it are the results of the exercise of its own and of no borrowed power, and though some of the old leaven clings to the accounts we get now and then of the living actions of bone and tooth, I have no doubt that what is true of a living tissue, easily made the subject of observation, is true also of more complex ones, with whose elements other accessory tissues are mingled.

In the seats of formation of pus we have been considering, the corpuscular and formed tissue elements are ordinarily bathed in lymph transuding through the cement spaces of the endothelium of their vessels, and

having amongst it, here and there, amœboid corpuscles; now, a greater amount of blood than ordinary circulates through the vessels, these are dilated, the cement between their endothelial cells is of greater bulk and softer than ordinary; the fluid plasma and lymphoid corpuscles of the blood pass out into the tissue, which becoming tense and having its vitality impaired, acts as foreign matter to the effused fluid, and leads to the disintegration of some of its corpuscles and coagulation. Meantime the supply of nutritive material increases, the redness, heat, and throbbing become more intense, the part becomes firm and brawny with its increasing mass of corpuscles; and then, the violence of the action being over, and the vitality of the central part of the mass lessened by the tension, pallor and œdema, with great relief from pain, succeed; softening, degeneration, and solution of both tissue and exudation occur, and the fluid mass approaches the surface and points.

If it seem strange that the same process should produce necrosis at one part and rapid growth and multiplication of corpuscles at another, let us recollect what happens in the healing of ulcers. The surface is no longer supported by firm skin, therefore its vessels dilate and exudation occurs freely. Stimulated to unwonted activity, the connective-tissue corpuscles multiply rapidly; they first form rounded, then spindle-shaped cells, and ultimately the fibres, corpuscles, and ground substance of the new connective tissue of the cicatrix, while the exudation and the migrated corpuscles it contains disintegrate and soften into pus, which escapes on the surface. As the healing proceeds, the epithelial cells at the edge of the ulcer divide and produce others like themselves, which gradually extend over the surface and cover the newly formed connective tissue corium with an equally new epithelial layer, both having been derived from similar pre-existing tissue. The newly formed cicatricial tissue scarcely equals the old in bulk; therefore the surface is generally below the surrounding level, the ulcer healing down, not up, as Dr. J. Hamilton has expressed it, in his admirable demonstration of the changes attendant on the healing of an ulcer, in the *Journal of Anatomy and Physiology* for July, 1879, from which I have freely extracted these details.

Let us turn for a moment to the peritoneal surface, on which such a proliferation of cells as we have been considering has been going on for some time, and we shall have no difficulty in understanding that, while effusions may be absorbed by it with great rapidity as long as its stromata are healthy, when these are obstructed or obliterated by masses of proliferating corpuscles, the diaphragm, pump as it may, becomes entirely powerless to empty the sac of its fluid contents.

A very interesting case occurred to Dr. Whitla, of this town, in which obstruction and rupture of the thoracic duct led to the passage of the whole chyle into the abdominal cavity for several months. The surface of the peritoneum was everywhere studded with tubercles, and in consequence absorption of the fluid could not take place. It was removed by tapping at intervals in quantities of twenty pints or more.

The importance of the physiological arrangement by which the lung is irritated by lymph from the pleural to the vesicular and bronchial surfaces has, I think, not been sufficiently appreciated. The application of cold to the surface of the body produces general congestion of the lung, taking the form of pneumonia, pleuritis, or bronchitis, in different persons, according to their respective liabilities to these diseases. But the addition of one of these diseases to another which has been primarily produced is not as easy to explain by reference to their entirely different capillary blood-vessels as by the great freedom of communication of their lymph-passages.

Salivary secretion discharged after stimulation of the chorda tympani of a salivary gland deprived of circulating blood is no doubt derived from lymph previously stored in the gland itself; but under normal conditions this exalted action of the gland tissue is attended by the circulation of a greatly increased quantity of blood through it, a notable instance of afflux of blood attendant on increased vital activity of a tissue. The case of muscular tissue is exactly similar. I presume there can be no doubt that the increased activity of the circulation leads to increased transudation of lymph, which, however, does not coagulate, because the healthy limit has not been passed. But if the lymph had transuded into tissue which had been previously damaged, or damaged by the exudation itself, it would have coagulated as the veritable exudation of inflammation does.

When we call to mind that the cellular elements of capillary walls are continuous with the framework of lymph spaces, which themselves communicate through the endothelial cement with the lumen of the capillary tube, the continuity seems to reduce the question, whether the phenomena of inflammation depend on increased vital attraction of the tissue for blood or on some altered vital action of the vessels, to one mainly of words.

Yet the separation which is effected by the endothelial cement between the circulation of red blood-corpuscles in capillary vessels and that of lymph and white corpuscles only in lymphatic spaces is a real separation—a separation by a living colloidal septum of great liability to change. It suggests the necessity of a supply of oxygen and red corpuscles to some tissues, while others, such as cornea, have all their vital needs supplied by fluid plasma and white corpuscles.

If I have occupied much of your time on matters which I conceive to involve fundamental principles of physiology and its twin-sister pathology, and made free use of vital action, of which we cannot hope to learn more than the manifestations, let me plead the powerful influence of early impressions gathered from a most revered and philosophical teacher, the late Dr. Alison, who held that the essential peculiarity of inflammation is a peculiar perversion of nutrition or of secretion.

In the very pleasant examination of the border-ground of physiology and pathology, which the writing of this address suggested, nothing has been more forcibly brought before me than the clear insight which the painstaking and accurate investigations, and the genius of Sir James Paget gave him, long years ago, into many vital phenomena which seemed startling when they were spoken of individually. Thus, in his lectures at the College of Surgeons, from 1847 to 1852, he demonstrated many of the conditions under which exudations coagulate, or are restrained from coagulating, conditions which Mr. Lister's subsequent careful experiments have more fully elucidated in connection with the conversion of lymph corpuscles into granule cells, inflammatory globules of Gluge, a change first demonstrated by Reinhardt, and independently by Sir Andrew Clark. He pointed out that it is impaired nutrition, fatty degeneration, not death, which leads to absorption; he described most graphically the hardening of the wall of an abscess by coagulation of plasma, which neither the exuded corpuscles nor the fluid plasma alone could effect, and followed this by a clear account of the subsequent liquefaction of the hardened mass by what he styled "liquefaction degeneration," a great feature in Dr. Ziegler's more modern description and demonstration of what happens in the formation of a blister from a burn, and in the disappearance of clots of blood. And in the same lectures Sir James pointed out that granulations and clots of blood hinder the healing of wounds, leaving it for Dr. J. Hamilton, only quite recently, to prove this by irresistible microscopical evidence.

Knowledge derived from experience is never more interesting than when confirmed by scientific examination. Dr. Hamilton's paper on sponge-grafting recalled some of the earliest lessons of my professional life under a very able surgeon, the late Mr. R. C. Botham, of Chesterfield. He taught me to treat foul ulcers of the leg in workingmen by scrupulous cleanliness, a pad of lint steeped in solution of chloride of lime on the ulcer, then oiled silk

and a constantly applied bandage, making equal pressure from the toes upward, and kept wet with solution of chloride of lime. The success of this treatment was most marked, and I now see that, beginning with an absolutely clean surface, the dressings acted antiseptically; they prevented the contact of the atmosphere, and afforded the support which Dr. Hamilton has shown to be so essential for healing wherever the restraining pressure of the skin has been removed.

Dr. Cory's unfortunate success in vaccinating himself with matter taken from the cow-pox pustule of a syphilitic child, will lead to a reconsideration of the respective powers of development of the different constituents of the blood, and to the relations of its white nucleated to its colored non-nucleated constituents.

At the last meeting of the British Medical Association, Dr. Schäfer called attention very pointedly to the function of reproduction as belonging to the nucleus of a cell, and it is long since Dr. Beale showed the great power of the germinal matter as compared with that of the formed material of tissues. Yet for years the startling proposition has been maintained that syphilis is alone communicable in vaccination by the colored non-nucleated formed constituents of the blood. Every medical man knows the potency of the lymph taken early from a vaccine vesicle as compared with that obtained in the later stages when the lymph-corpuscles have degenerated into pus. And the previous considerations which I have urged upon you show that these lymph-corpuscles accumulated in the vaccine vesicle have been produced in this local inflammation either by migration and subsequent multiplication of the white corpuscles of the blood or by active proliferation of the connective-tissue corpuscles of the part; in either case from germinal matter, active, living protoplasm, if not by the direct agency of the nuclei of such matter.

Recalling Mr. Goodsill's happy demonstration, that the cells of lymphatic glands are developments of the epithelium of lymphatic vessels, and Dr. Klein's beautiful tracing of endothelium and the corpuscles of connective tissue at the fenestræ of omenta and in other situations, we recognize the family relationship between the lymph-corpuscles which, when detached, constitute white corpuscles of the blood—the endothelium of serous membranes so often found germinating abundantly—and the connective-tissue corpuscles, which Dr. Hamilton has figured and described as multiplying with great rapidity when stimulated by the agents causing inflammation and unduly fed by a largely increased afflux of blood.

If it be asked why syphilis does not more frequently follow vaccination, the reply is simple, that the greatest care is taken to select none but perfectly healthy children for the collection of lymph, and that it is possible that when lymph has been collected where syphilis, though present, was not recognized, the results may not always have been referred to their proper causes.

This leads me to mention the most difficult, exciting, and important problem of the day: whether other diseases than small-pox can be deprived of their virulence by vaccination.

You are aware with what ardor M. Pasteur has espoused the affirmative side of this question, and it was very natural that, having had a certain amount of evidence that infectious diseases of animals may be deprived of their fatal effects by previous vaccination, he should have been led to hope that what is true of one is true of all, and that in this way even hydrophobia may be deprived of its horrors.

The exceedingly careful researches of Dr. Klein, described with such accuracy of detail that they may be followed by any one, have shown that there are numerous pitfalls in the way of such inquiries, and that we are yet very far from being able to foresee the end of them. Yet the progress made gives great hope for the future, for careful experiments by Drs. Klein and Roy, and by Dr. Burdon-Sanderson and Mr. Duguid, have clearly shown that sheep inoculated with anthrax blood of the white mouse, cattle inoculated with anthrax blood of the guinea-pig, and cattle inoculated with anthrax blood of the South American bisachas are, for a time at least, insusceptible of a fatal attack of the malady.

Dr. Klein has found that the virus which communicates swine disease is a form of bacillus which he has been able to cultivate out of the body in various ways, and which is capable of forming spores when exposed to the air. But though the organs of a dead animal swarm with the bacilli, these soon degenerate and become harmless, without forming spores, if the body be not cut, and this happens equally whether the body be interred or not.

From long experience I am satisfied that the bodies of persons who die of small-pox, or of puerperal or other fevers, may be dissected without harm if properly prepared.

Dr. Burdon-Sanderson has suggested the possibility of the determination of the morbid process in contagious diseases by an action similar to the spontaneous arrest of septic fermentations by the development of members of the aromatic group of chemical compounds destructive of any further manifestation of the vital activity of septic microphytes, and he has undertaken to direct a series of researches on this subject.

On the one hand, what can be more alarming than that, under certain conditions, living organisms of the utmost minuteness enter the body and multiply with a rapidity with which fungi alone can multiply, corrupting the blood, causing local coagulations, obstructions of vessels, abscesses, and death? and, on the other hand, what can be more comforting than Dr. Sanderson's happy reference to the manner in which salivary, gastric, or pancreatic digestions furnish the means of their own arrest, and to the similar manner in which the organisms containing the virus of contagious diseases prepare the means of their own destruction?

Surely the day will come when it will be seen that gratitude and reverence are due to such men as Pasteur and Koch and Sanderson and Klein, rather than that they should be assailed with insult and hindered by mischievous legislation, as if they were criminals rather than benefactors of the whole human and animal races.

Let me mention certain circumstances which I think indicate that we are on the eve of great simplification and extension of our knowledge. It was a great step when the late Master of the Mint taught us the difference between crystalloids and colloids, and many of the laws of diffusion and osmosis. It led the way in an intelligent investigation as to how, in the process of digestion, colloidal starch and albumen are fitted to pass through the membranous walls of the alimentary canal. We have found that contact with a mere trace of saliva or pancreatic or intestinal secretion suddenly converts starch into sugar, and that a large number of other organic matters produce a similar result. Bernard showed, by experiment, how different cane, grape, hepatic, and diabetic sugars are in their relation to the economy; that starch and sugar are converted into fat by the liver; and that by an insignificant lesion of the medulla oblongata temporary diabetes can be produced. And we know, further, that during the conversion of starch into sugar there are many almost insensible stages. The process is influenced by numerous conditions which require investigation at every step to enable us to trace these substances at their entrance into the economy, in the regions where they contribute to the production of heat and motion, and until their final deposition or discharge in some more oxidated form.

Similarly I would suggest the most careful observation—not by one person, but by every one in his own sphere—of the conditions under which albuminoid matters are changed, whether after their entrance into the upper or lower end of the alimentary canal; of those under which they pass into the blood, circulate, and become tissue;

also of the forms under which they reappear in their variously oxidated conditions in the urinary excretion in health and disease.

The marvellous differences between albumen of the egg and serum and albumen washed free from salts, or when changed into acid or alkali albumen; the modes of production of peptone and its varieties; the differences in the conditions and results of the action of the gastric, pancreatic, and intestinal secretions; and very specially the appearance in the urine, in disordered or diseased conditions, of albuminoid substances yielding reactions, showing that the variety of forms in which these substances appear are no less numerous or closely related than those of the varieties of sugar and starch, all point to the necessity of rigorous investigation, and to the possibility of presenting these substances and their various alternations in a light far more simple than has as yet been suspected.

It is unfortunately the custom in this country to leave such investigations to be undertaken by private individuals, very few of whom have the necessary physiological and chemical knowledge, and fewer still have the requisite time and means at their disposal. That we have men admirably fitted to direct and aid or to conduct such inquiries is plain from the researches of Simpson and Thudichum and the aid rendered by Gamgee, Ralfe, and T. C. Charles. And I am not without hope that the public spirit of this great country may yet be aroused by the expressed opinion of the President of the Royal Society and others as to the duties of the state in such matters, and that something worthy of the nation may yet be done to aid the teaching of science and to promote scientific inquiry.

PRACTICAL OBSERVATIONS ON THE HUMAN EAR AND ITS DISEASES, WITH ILLUSTRATIVE CASES.

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I.—The External Ear.

(Continued from No. 713, p. 7.)

HÆMATOMA AURIS—SYMPTOMS.

The affection may begin in either ear, but most frequently attacks the left; both ears are sometimes attacked about the same time, the left, however, being usually, it is alleged, the first to exhibit symptoms of invasion. The exudation always takes place, as far as my own experience goes, on the outer surface of the pinna, and seldom affects the inner surface at any period of the disease. The swelling in most cases begins near the superior border of the pinna, but it may show itself on any portion of the exterior surface, including the concha. The lobule is never directly affected, since it contains no cartilage, and the cartilaginous portion of the external auditory canal is seldom involved. The tragus seems to enjoy entire immunity from attacks.

This selection of the outer surface of the auricle seems to be owing to the greater vascularity of this region, upon which the branches of the anterior and posterior auricular arteries ramify and anastomose, and to the fact that it almost invariably receives the impact, when the auricle is struck, with greatest force. Where there is an inflammatory movement in the parts, the connective tissue on the inner surface of the pinna may become the seat of suppurative action and an abscess may form; or, should perforation of the cartilage take place, the contents of the tumor may pass through from the anterior cyst, separating the perichondrium from the cartilage on the inner surface, and escape into the connective tissue even.

When the invasion takes place the affected region usually presents a hyperæmic appearance; frequently there is in lunatics a very decided flow of blood toward the head, producing great capillary turgescence of the face, ears, and eyes; in some instances an effusion of blood beneath the conjunctiva of the eye has been known to occur simultaneously with the appearance of the othæmatoma. In the more severe cases, where the characteristic effusion takes place rapidly with inflammatory action, there is often an elevation of temperature; and in nearly all instances the integument assumes a bluish or purplish hue. The affected organ is seldom very painful, even where the tumor is greatly distended or roughly handled, especially in boxers and lunatics, where the parts have been subject to rough treatment from repeated contusions; in the latter, however, the ears are wanting in sensibility at all times. The writer has, however, frequently observed that sensibility is very much exalted in some cases occurring in sane persons.

The progress of the tumor varies very much; it may rise to a considerable size in the course of a few hours, and when first seen may be as large as an almond or a walnut. Sometimes the distention continues to progress rapidly, the walls becoming thinner in consequence of the stretching, until, finally, in the worst cases, they undergo spontaneous rupture unless relieved by an operation. In asylum cases it is not unusual to allow the cyst to burst in this manner; thus of the twenty-four cases reported by Hun fifteen ruptured spontaneously; in one of them the left ear burst on the twelfth day at the upper part of the concha, while the patient was sitting in a chair, and the contents "were thrown to the ceiling, a distance of twelve feet, so as to stain the plaster."

These tumors are, however, frequently without some of the symptoms of inflammatory action, passing through all of the stages of the disease without either heat or pain being experienced by the patient. This variety manifests a disposition to develop slowly, and has a tendency to spread itself laterally rather than in thickness. The following case is one of this description:

Case I.—W. W——, an Englishman, forty-three years of age, by occupation a negro minstrel; health good, and he claims to have no bad habits; never had any aural disease before; came to the New York Eye and Ear Infirmary May 4, 1880. States that two weeks ago, while washing the burnt cork from his face, he felt a slight soreness on the top of the right auricle. On examination he found a small tumor on the outer aspect of the auricle, which afterward gradually increased in size until it was larger in diameter than a twenty-five cent piece; it then obliterated the antihelix, and finally became about one-half an inch in thickness. On shak-

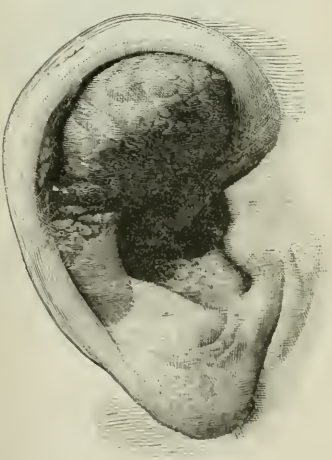

Fig. 1.

ing his head the patient could "feel the contents of the tumor rattle."

Dr. Henry D. Joy, to whose kindness I am indebted for the case, had painted the tumor with the tincture of iodine for the first few days, and it had decreased somewhat in size. When the iodine stains disappeared the color of the tumor was found to be but little more red than normal, but its walls were thickened. Under the expectant plan the fluid continued to be reabsorbed quite rapidly, and later on the contents had a doughy feel.

June 4th.—The patient himself has occasionally painted the ear with tincture of iodine, and for the past two weeks it has diminished notably in size. Thickening and immobility of the integument, however, remain. There is no shrivelling of the cartilage, and but little deformity from the remaining induration of the parts. It is the belief of the patient that the auricle, previous to the beginning of the swelling, had been struck a slight blow by a papier-maché stove, which he had to throw upon his shoulder during a play.

Fig. 1 represents the appearance of the ear immediately after the tumor had commenced to subside.

In some instances, however, cases like the above, after remaining *in statu quo* for a variable period of time, suffer an exasperation from repeated contusions, and an othæmatoma of very considerable size may be developed. Such an aggravation may also be brought about by injudicious operative procedures, or probably by an exacerbation of cerebral symptoms, giving rise to increased activity of the general circulation about the head and ears.

In the beginning of an attack, and during its progress, the patient sometimes experiences a feeling of heat in the affected organ, like the extreme congestion due to flushing; in the insane, however, precursory signs are not likely to be reported.

Generally the outlines of the outer surface of the pinna, formed by the foldings of the cartilage, are more or less obliterated, according to the extent of the tumor; where there were ridges and depressions before, the surface will be smooth—usually convex even.

The contents of the tumor, in the beginning, may consist of blood and serum, or of the latter principally; even when at first serous, the fluid usually becomes serosanguinolent sooner or later. In some instances, however, the serous character continues throughout. In most cases an early formation of coagula takes place in the tumor, which, not being reabsorbed, increases ensuing deformity. In the milder form of the affection, sometimes described as "œdematous," but little fibrous tissue remains, reabsorption being more complete; such cases seem to pass through all of the stages with but moderate inflammatory action.

The wound which affords an outlet for the contents of these cysts, when they require any, whether from puncture or due to spontaneous rupture, has no tendency to remain open, and the cavity, therefore, sometimes refills in the course of a few hours; on the other hand, in certain cases the cyst pours out fluid so rapidly that a discharge constantly trickles down from the opening, thus preventing the wound from closing.

The duration of othæmatoma will of course vary greatly, depending as it does on the severity of the case, the rapidity of reabsorption, and the habits of the patient; thus in lunatics, inebriates, and boxers the organ is liable to repeated contusions, giving rise to aggravations which may retard the cure. Sometimes reabsorption comes to a stand-still, and a considerable tumor remains for an indefinite period of time.

The writer has seen a case of this kind which is given below:

Case II.—Charlotte K——, aged thirty-nine, was admitted to the New York City Lunatic Asylum in May, 1880, when suffering from her first attack of acute melancholia. She had delusions of persecution and suicidal tendencies, was subject to exacerbations of excitement, during which she was violent and destructive until quieted by large doses of sedatives. In June, 1883, hæmatoma commenced in the left ear, which ran its course in two months without any particular treatment, leaving much deformity. On September 12, 1883, othæmatoma commenced in the right ear: at first it was intensely red, but finally became purplish in appearance. No treatment.

October 31st.—The patient was examined by the writer and a considerable collection of fluctuating fluid was detected in a cyst an inch in length, on the outer surface of the right auricle. It was recommended that the fluid be evacuated by a rather free incision, the walls of the cyst painted with Churchill's solution of iodine, and the auricle bandaged to the head so as to cause a moderate amount of pressure. This was done by Dr. L. C. Toney, though through some misunderstanding three successive applications of the iodine were made. By November 3d the walls were adherent, and on November 9th the wound was found healing by granulation. When the writer last saw the ear, on November 23d, it was found that the sac was entirely obliterated. The cicatrix was slightly stained from the excessive use made of the iodine solution. There was scarcely any deformity.

In some instances a sinus remains, affording a serous discharge which may continue for an indefinite period. The following is a case of this kind:

Case III.—Annie M——, aged thirty-five, was admitted to the New York City Lunatic Asylum, March, 1879, with acute mania. Soon afterward, on refusing food, was forcibly fed—the process consisting in placing the head of the patient under the left arm of the operator, while with his left hand a wedge is held in the patient's mouth, and with the right hand the feeding-tube is inserted. Subsequently hæmatoma developed in the left ear. Although it seems probable that the ear was bruised during the forcible feeding, yet the patient was frequently engaged in fights with other patients at this time, when she was liable to receive blows upon the ear. There was no treatment, and the tumor passed into a chronic stage, which escaped observation until September, 1883, when serum was observed to ooze from an opening in the outer surface of the auricle just above the concha. This opening was enlarged and the cavity syringed out with a solution of carbolic acid with no result. On October 19th the writer examined the case and determined to obliterate the sac by an operation. The sac was laid freely open, cleansed of the copious flow of blood and other contents, and the walls were then thoroughly painted with Churchill's solution of iodine. Notwithstanding the employment of such pressure as was found to be practicable, the parts healed up again, leaving a small sinus as before. Subsequently the operation was tried three different times by Dr. Dent, the assistant superintendent, without avail.

Fig. 2.

November 23d.—The writer finding a slight sero-sanguinolent discharge remaining, concluded to try to obliterate the tumor by scraping its walls with a cutting-scraper. It was found, however, that the walls of the sac, which proved to be very large, consisted of broken-up and shrivelled cartilage, presenting rough and uneven surfaces. A partly detached plate of cartilage was found lying on the outer wall, and the edge of the superior portion of the helix could be felt. There was a deficiency in the cartilage composing the inner wall of the sac. It was evident that the irregularities of the walls had prevented adhesion of the surfaces from taking place.

Operation.—With scraper (Fig. 2) every portion of the secreting surface was destroyed, considerable broken-down tissue being brought away by the instrument, which had to be cleaned several times. The oozing of blood was quite profuse for a time. The parts were thoroughly cleansed with hot water, and pressure established by bandaging the padded ear firmly to the side

of the head. It was noted that throughout the operation the patient seemed to experience no pain whatever. No anæsthetic was employed. The parts healed kindly, pressure was maintained for some time afterward. After the first week there seemed to be some improvement, but when I saw the patient, on December 22d, the cure was incomplete. It is very evident that union can only be obtained between the walls of the sac in this case by dissecting out the irregular and detached masses of cartilage which prevent them coming together.

In a very considerable number of cases the disease will terminate spontaneously in from four to eight weeks, depending somewhat on the extent of perichondrium affected and the quantity of the effusion; othæmatoma, however, cannot be said to have any regular course where it occurs in irresponsible or uncontrollable patients.

Subjective symptoms.—These usually are present where occlusion of the external auditory meatus is produced by swelling of the concha; they consist in deafness—due to closure of the canal—and tinnitus aurium—from increased tension of the membrana tympani. The extent of these symptoms in lunatics cannot with accuracy be determined.

Complications.—The retroactive consequences of this local trouble in the insane need not be considered here, yet it is worthy of note that the posterior auricular artery, through one of its branches—the stylo-mastoid—communicates with the middle meningeal by anastomosis, thus establishing a significant and important relationship between the ear and the meninges of the brain. In the mentally sane this becomes a factor of serious import, and should not be overlooked; besides, more or less general nervous sympathy may exist in sane patients.

Parts contiguous to the ear are sometimes implicated in an extension of the inflammatory process; neuralgia may be kindled into action, and general febrile action may supervene. Whilst othæmatoma may be produced by disease or wounding of the cartilage of the external auditory canal, it seldom extends itself to these parts from the pinna; and the middle ear, so far as is known to the writer at least, has never been invaded by an extensive inroad of the inflammatory process.

DIAGNOSIS OF OTHÆMATOMA.

The "Asylum Ear" was, by all observers half a century ago, regarded as a curiosity simply, and even at the present time it seems to very often escape attention entirely, or to be merely entered in asylum case-books as a nondescript phenomenon. It is to be hoped that a want of knowledge in this respect will not long prevail where the disease is liable to occur, and where treatment may do much to ameliorate the condition of the patient. In fact, the want of adequate knowledge in regard to othæmatoma seems scarcely any longer excusable when we consider the light that has been thrown upon the subject during the past twenty years by various authors.

In distinguishing this affection from erysipelas, phlegmonous inflammation, frost-bite, burns, eczema, tubercular syphilis, and other cutaneous affections one almost constant causative agency should be first sought for, namely, trauma. Whether predisposing conditions are present or not, the history will give unmistakable evidences of this factor. There may often be reasons for suppressing the truth; persons may desire to conceal the facts of blows having been administered, or they may have been so slight as to have escaped attention, nevertheless where othæmatoma is suspected, inquiries in this direction should be diligently pressed.

The essential nature of the affection depending on a perichondritis of the cartilage of the auricle, its existence may be readily detected by examining the contents of the tumor, which will be found to be serous or sero-sanguinolent. These tumors are usually of rapid formation, and speedily refill again on being evacuated. It will be found that they have well defined and resisting walls, a fact which may be determined by exploring the walls of the tumor with a probe after it has been incised or ruptured.

Abscesses or blood extravasations rarely develop in the scanty connective tissue of the auricle, and they are much more limited in dimensions than othæmatoma; their walls, moreover, give way to moderate distention, and their progress will be found to be less protracted than the tumors under consideration. The serous or sero-sanguinolent discharge which characterizes othæmatoma, could not have its origin in a cavity formed by the breaking down of the connective tissue by effused blood, but must arise from a secreting surface.

Suppurative perichondritis has been alluded to by writers, but it is difficult to see how pus could be secreted by these cysts; extravasated blood may, however, become putrescent, or a perforation of the walls of the cyst may afford a communication with an abscess behind the cartilage of the auricle, or with the deeper parts about its attachment to the temporal bone.

Abscesses, however, may develop in the post-auricular connective tissue during the progress of cases of marked inflammatory tendency or as a result of contusions. In such cases, or where swelling occurs without maturation, an asymmetrical prominence of the auricle occurs.

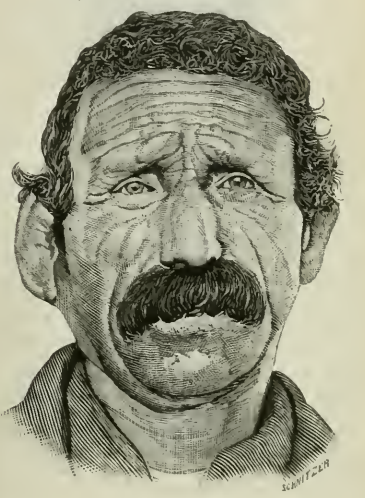

Fig. 3.

The following case is in point. Fig. 3 is an excellent likeness of the patient, and Fig. 4 is a view of the post-aural abscess, natural size.

Case IV.—Michael F——, thirty-five years of age; married; intemperate; entered New York City Asylum for the Insane, with dementia, 1872. Is morose and stupid. In 1878 found to imagine that he had a woman in him. In 1882, delusions of dead bodies in his head. April, 1883, extravagant delusions, as head filled with articles of food. The eyebrows have almost disappeared from constant rubbing, tries to rub his eyes out. November 24, 1883, hæmatoma of the right pinna observed. Continually rubs side of head with stones and beats himself. November 25th, the tumor on inner surface of auricle was incised. . . .

I saw this patient on November 27th, and the following is an abstract of the notes taken by Dr. Robert Barclay, who assisted me: The right auricle is thickened, the outlines of the outer surface being almost obliterated. The whole organ is red and tender, although sensibility is much lowered. A large fluctuating abscess occupies the lower half of the inner surface of the pinna, and extends downward, spreading out over the mastoid process and involving the lobule. There is a slight indentation where incision was made on the 25th. It has been treated by

applications of iced water. The writer made an incision, about half an inch long, into the lower part of the abscess, evacuating about a fluid ounce of pus. The teeth of this patient were very carious, quite so on the right side, and were all of them enveloped in much

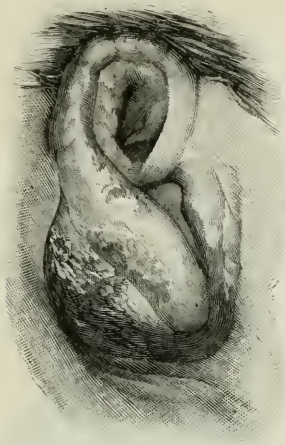

Fig. 4.

tartar. It would seem that the post-aural abscess, although consecutive to the othæmatoma, was due to the constant bruising of the parts by the patient himself. The othæmatomatous tumor on the exterior surface of the auricle probably gave rise to unusual vascularity in the whole organ, and there may have been an opening in the cartilage permitting the passage of the contents of the cyst into the connective tissue behind the ear, but there was no evidence of any separation of the perichondrium from the cartilage on its inner surface, and the contents of the abscess apparently contained no serum. There was no history as to the exact duration of the othæmatoma.

In many cases of othæmatoma the auricle does not stand off from the head, the disease being limited to the wing of the ear throughout. Parts contiguous to the auricle are always the last to be affected, if invaded at all. The trouble may be distinguished from erysipelas, for which it was formerly sometimes taken, by its well-defined sacculated appearance and the absence of superficial changes common in erysipelas. Eczema and erysipelas, unlike othæmatoma, are liable to extend into the external auditory canal, while the latter, at most, usually, occludes the meatus by the encroachment of its sac. The cutaneous affections mentioned above, moreover, frequently invade the neighboring parts, especially the inner surface of the auricle; none of them, however, leave the deformity which characterizes othæmatoma. Nævi may resemble othæmatoma very closely in some instances. Dr. Gorham Bacon showed the writer a case of this kind occurring in a woman where a large portion of the auricle was involved. The marked pulsation and absence of fluctuation in such a case would serve to distinguish it from othæmatoma. The age of the patient should be considered in arriving at a diagnosis; thus eczema is most frequent in infancy and childhood, whilst othæmatoma is more particularly a disease of adult life. Cases of othæmatoma, it is true, have been reported as occurring in children; one of them, it is stated, occurred "idiopathically" in a child one year and three months old, where an otorrhœa and eczema of the external auditory canal preceded the attack.[1] The writer has never seen a case of this kind, and is convinced that their occurrence is extremely infrequent.

(To be continued)

[1] Dr. Weil, Stuttgart: Beitrag zur Casuistik der Othämatome—Monatschrift für Ohrenheilkunde, May, 1883.

ON RESPIRATORY MEDICAMENTS.

By Professor GERMAIN SÉE,

Member of the Academy of Medicine, and of the Faculty of Medicine, Paris, France.

Pneumotherapy constitutes an artificial respiratory method, calculated to facilitate respiration as well as the central and peripheral circulation. It comprises the fixed respiratory apparatuses, known for many years, but whose effects on the heart and circulation have less engaged the attention of observers than the action of these artificial atmospheres on respiration and nutrition.

Pneumotherapy, in its more modern development, is practised by the aid of portable apparatuses, invented by Waldenburg, with more precise and special applications to diseases of the heart and blood-vessels.

Effects of Normal Inspiration and Expiration on the Thoracic Organs.

Respiration in free air exercises a marked influence on the circulation.

Inspiration.—The pulmonary air is in a state of diffusion, and thereby exercises an aspiration or suction on the vascular system in such a manner that during inspiration the venous blood arrives with greater facility and speed from the head and trunk to the thorax and heart; the latter dilates easily to the inflowing current. During this period, nevertheless, the expulsion of blood from the heart takes place with less energy, and for this reason vascular tension diminishes during the inspiratory act.

It is only at the end of inspiration that the pressure of the pulmonary air becomes equal to that of the atmosphere, and then the modifications in the circulation, effected by inspiration, end.

Expiration.—Here everything is reversed; the thoracic parietes sink in, compressing the air in the lungs which undergoes condensation; there results at the same time a pressure on the heart and great vessels. The venous blood flows with difficulty into the thoracic cavity and heart, the veins of the body swell; the contractions of the heart take place with more energy, but without power to force a great deal of blood into the arterial tubes.

Effects of Inspiration of Compressed Air.

Mechanical effects on the lungs.—The inspiration of compressed air determines at first a sensation of plenitude and distention in the thorax, resulting from the expansion of the lungs and the entire thoracic cavity, an expansion which is more marked than that which follows the most powerful voluntary inspiration, although the inspiratory muscles do not in this case put forth any sensible effort. The compressed air which penetrates the lungs begins by diffusing itself with the residual air in the lungs, and it is not till the end of inspiration that it reaches the degree of pressure which it had in the apparatus. The quantity of air introduced into the lungs and then eliminated during these inspirations of compressed air amounts to one thousand cubic centimetres, according to Waldenburg, and according to Speck, to seven, eight, and even ten thousand cubic centimetres each minute; this explains the thoracic enlargement, which may exceed the normal by four centimetres. The lungs become thoroughly permeated with air, and clear themselves of bronchial mucus. Still later, both inspiratory and expiratory force is increased, and this, not only during the pneumatic treatment, but for some time after.

The same may be said of that increase of vital capacity which results from treatment by compressed air, it lasts for a considerable time. The condition of success is not to exceed $\frac{1}{10}$ of the atmosphere pressure, for if this condition be not observed serious accidents may occur, such as loss of elasticity of the pulmonary tissue, pulmonary emphysema, and hemorrhages from rupture of blood-vessels, if the lung-tissue be at all altered.

Effects of inspiration of compressed air on the heart and circulation.—[The entire subject of the physiological

effects of inspiration of compressed air demands revision and restatement. No one has acknowledged this more plainly than Professor Sée himself, when, after a long and interesting statement of Waldenberg's theory, he confesses that it has been overthrown by recent sphygmographic explorations. This being the case, I have taken the liberty to omit this portion of Professor Sée's lecture, for, however reasonable any theory may be, if it will not stand the test of facts it is worth nothing.

Waldenberg established the following laws: Inspirations of compressed-air augment the pressure in the entire arterial system; expirations in rarefied air diminish the pressure in the aortic system. Lambert, Ducrocq, Riegel, Franck, Zuntz, and others, by a carefully conducted series of experiments, arrived at opposite results.

Dujardin-Beaumetz, in summing up the results of experimentation, thinks that compressed air has often a very favorable effect on the respiration, producing a current of air through the air-passages which clears them of mucosities, and gives to the pulmonary parenchyma a new elasticity. The vital capacity is augmented, as is shown by the spirometer. On this point, Waldenburg is in harmony with all other experimenters. As for the effect of compressed air on the circulation, the opinions are so contradictory that nothing very reliable can yet be determined; it is by no means demonstrated that this therapeutic method is of any efficacy in diseases of the heart, while its utility as a respiratory medicament in chronic bronchitis, asthma, emphysema and phthisis is unquestioned.—Tr.]

Experiments on animals by most painstaking observers, such as Einbrodt, Hering, Drosdorf, Lambert, Zuntz, have cast great doubt on the theory of Waldenburg, seemingly so reasonable. Clinical observations, aided by tracings of the pulse, have confirmed the conclusions derived from physiological experimentation. These experimenters made use of the kygmograph, a sort of manometer, introduced into the arteries in animals. In all the conditions which to Waldenburg indicate an augmentation of arterial pressure, they constantly found a lowering of vascular tension. Where a diminution of pressure had been noted experimentation showed an excess of pressure. Waldenburg sought to explain this discordance by saying that the tension of the vessels and intravascular pressure are not correlative terms, and that sometimes the tension of the arterial walls augments while the blood-pressure diminishes. He sought to make this demonstration by means of an instrument designed to measure the degree of arterial tension, and which he called a "pulse-shower" (*montre du pouls*). The downfall of the theory was nevertheless complete.

Clinical and sphygmographical observations.—Clinical observations have conclusively confirmed the results of experimentation. Riegel and Franck distinguish two opposite periods, the one of the initial phenomena, the other a final period, which is the most important. Their results agree with those of Ducrocq, Drosdorf, and Zuntz. Omitting the somewhat tedious details of sphygmographic tracings (for which I refer you to my work on "Anomalous Forms of Heart Disease") these careful observers are unanimous in affirming that the first effect of inhalations of compressed air is to produce a diminution of intravascular tension, with diminution of the frequency of the pulse; as soon as the atmospheric pressure on the lungs, the heart, and blood-vessels diminishes, the blood-pressure rises.

It results from these observations that, while Waldenburg taught that compressed air was a means of fortifying the heart, by a sort of regular gymnastic exercise, the observers cited above, and especially Oertel and Schnitzler, have never noted such effects, especially in the application of pneumotherapy to diseases of the heart.

Dynamic effects.—According to Sommerbrodt and Biedert, the intra-alveolar air, by the exaggerated pressure which it exerts on the respiratory mucous membrane, produces on the sensory nerves of the lungs an impression which, by reflex action, excites the vaso-dilator nerves, in this way diminishes the vascular tonicity, dilates the blood-vessels, and lowers the pressure. On the other hand, the inhibitory nerves of the heart are enfeebled, and there is quickening of the heart's action and of the peripheral circulation; the intra-alveolar pressure thus becomes the regulator of the velocity of the circulation.

Chemical effects.—Every change of pressure in the inspired air or in the expired air determines increase of activity in the respiratory process; but the elimination of carbonic acid is always more marked than the absorption of oxygen, so that more oxygen is eliminated than was introduced previously. The action of inspired or expired air, then, resembles the voluntary augmentation of ordinary respiration, and the modifications ought not to be considered as the result of more energetic oxidations, but only as the consequence of a more complete diffusion of gas, abstraction being made of the muscular action (which is of little significance) during this more active respiration. These facts were long ago pointed out by Paul Bert.

RAREFIED AIR.

Expiration in rarefied air.—Expiration in rarefied air produces a very distinct sensation of retraction of the thorax. The abdominal viscera and diaphragm are drawn upward into the thorax by a sort of aspiration. The lungs are very thoroughly emptied of their atmospheric contents; even large quantities of residual air are eliminated, from five hundred to two thousand cubic inches, and even three thousand in the emphysematous.

It is easy to understand that by reason of this elimination the volume of the lungs is reduced. The expelled air issues in greater volume and the inspired air penetrates with greater facility; the inspiratory muscles are little taxed.

The contraction of the pulmonary area is shown by the cyrtometer, and amounts to from one to two centimetres of circumferential measurement. The retraction of the epigastrium, and especially the elevation of the diaphragm, recognizable by percussion, are, moreover, a proof of this narrowing of the field of respiration.

By long continuance in the practice of expiration in rarefied air an increasing augmentation of vital capacity is noted; this may, in the emphysematous, amount to five hundred, and even one thousand cubic centimetres. It is easy to detect, by the pneumatometer, an increase in the force of both inspiration and expiration—the latter by virtue of the less resistance which the elasticity of the pulmonary tissue and the muscles of expiration have to overcome.

Effects on the circulation of expiration in rarefied air.—These are similar to those of inspiration in free air. The venous blood more readily returns to the thorax and heart, the veins are emptied while the thoracic viscera are filled. The work of the heart becomes more difficult and the ventricular systole is weaker, pressure in the arterial system falls and the arteries are less tense and more compressible, the pulse is small and soft, and while the lesser circulation is overcharged, the greater circulation is poor in blood.

The nervous system is more irritated and reflex vaso-motor action is more marked than when compressed air is breathed.

Inspiration of rarefied air.—This ought to act on the circulation like inspiration in free air, and like expiration in rarefied air, but with more intensity. It is readily understood that more effort is required on the part of the muscles of inspiration to introduce the necessary quantity of air than when ordinary air is breathed; hence the respiratory muscles become strengthened by a sort of regular gymnastic exercise. The ventilation of the lungs, according to Waldenburg, is diminished; according to Speck it is augmented.

Expiration in compressed air.—By expiration in com-

pressed air the expulsion of air from the lungs is rendered more difficult. Here the muscles of expiration are called upon for more work. According to Speck, pulmonary ventilation is augmented, as it is by inspiration of compressed air, for although an obstacle to free respiration exists, this is overcome by the enhanced action of the breathing muscles, and air enters in great abundance. The organs of circulation are modified, as by inspiration of compressed air.

APPLICATIONS OF PNEUMOTHERAPY TO DISEASES OF THE HEART.

Waldenburg, Henich, etc., recommend inspirations of compressed air in certain cases, directing from fifty to one hundred inspirations, of $\frac{1}{100}$ to $\frac{1}{60}$ above the atmospheric pressure. The utility of these inspirations in any form of heart disease is doubtful. When you have a case of mitral disease with perfect compensation, compressed air is not necessary. On the other hand, if compensatory hypertrophy has not commenced, or if it is insufficient, compressed air removes the *besoin de respirer*, the dyspnœa, the congestions of the lesser circulation, the palpitations, and the cyanosis. This effect may be far more lasting than the period of inspiration. During the inspirations of compressed air the excess of pressure on the part of the air drawn into the lungs causes expulsion of the blood from the pulmonary vessels, and a clearing of the lesser circulation. Compressed air is then useful (*a*) to augment the systole and the arterial pressure, (*b*) to facilitate the passage of blood from the heart, (*c*) to render more difficult the access of blood from the great veins to the heart, and thus to free the lungs.

In these cases, says Oertel, it is preferable to expire in rarefied air, for then the vascular pressure and the tension of the arterial walls are augmented during the entire expiration, and stases in the peripheral veins are prevented, while the heart's energy is promoted by a more easy diastole. All this is uncertain and theoretical, the result, it must be confessed, of rather hazardous assertions, based on two successful cases reported by Henich and Schnitzler.

Aortic insufficiency and constriction.—In both aortic insufficiency and aortic constriction (according to Waldenburg) the dyspnœa is diminished because the intrapulmonary pres ure clears the blood-vessels of the lungs, before engorged; but the facts cited by Waldenburg have no value.

Fenoglio, in fact, denies the utility of compressed air in these affections; he thus formulates the application of pneumotherapy: In aortic insufficiency with excessive activity of the left ventricle we have an indication for expiration in rarefied air. We hope in this way, he says, to diminish the exaggerated compensation, and he cites three cases in support of this method of treatment. Under the influence of these expirations in rarefied air he has seen tension enfeebled and the arterial engorgement lessened; at the end of the expiration the sphygmographic elevation of the blood-wave was diminished, the line of descent became less vertical, and dicrotism was less marked. Little by little the palpitations diminished also, as well as the painful arterial pulsations and the feeling of anxiety and precordial distress.

Fatty degeneration.—Several cases treated by Waldenburg were benefited by compressed air.

Pulmonary cardiac hyperæmia, with hæmoptysis.—Despite the theory which indicates the employment of inhalations of compressed air, the facts are opposed to the treatment, and hæmoptyses are certainly to be feared.

Resume.—There is no precise indication, and there are everywhere contra-indications respecting the application of aërotherapy to diseases of the heart. It is a question yet to be decided, despite the rigor of the sphygmographic explorations of Franck and Riegel in their researches concerning the physiological effects of this respiratory method.

HEPATIC ALBUMINURIA.

By C. C. THAYER, M.D.,

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ALBUMINOUS urine always signifies a pathological condition. That pathological condition may be either within or without the kidneys; it may be entirely local, or may be general, and even in parts far remote from the kidneys. It may be inflammatory or mechanical, nervous, organic, or functional.

Traces of albumen in the urine are far from being a strange phenomenon. In fact, it is much easier to *discover* albumen in the urine, than accurately to define its pathological condition, or to declare its significance when found.

In the year 1827, when Dr. Richard Bright published his "Medical Reports" on albuminuria, the popular mind naturally drifted, as it was led thereby, to consider albumen in the urine to indicate definite pathological changes in the kidneys; and while we cannot justly say that this distinguished physician unequivocally declared that albumen in the urine was an *infallible* sign of renal disease, yet in his enthusiasm he pressed this feature, not too far, but to the exclusion in a great degree of other and equally legitimate phases of the same phenomenon.

These researches and reports rekindled and intensified a deep and wide-spread investigation into the significance of albuminous urine.

Christison, Osborn, and others indorsed, and further elaborated, the theories of Dr. Bright. Fourget reported albuminuria as dependent upon hypertrophy of the heart. Solon reported albuminuria as dependent on "obstruction of the circulation, peritonitis, crises of fevers, cutaneous affections, pregnancy, and pneumonia." Graves reported albuminuria as dependent on "chronic inflammation of the liver, phthisis, and diabetes" (Contributions to the Physiology and Pathology of the Circulation of the Blood," by George Robinson. London, 1857). The same author gives this proposition: "That the presence of albumen in the urine is produced by, and its proportional quantity is in direct ratio to, the degree of congestion of the capillaries of the kidneys, from whatever cause that congestion may arise" (Moreland).

Braun, Frische, Litzmann, reported albuminuria as dependent upon "mechanical pressure;" Rayer, Becquet, on "typhoid fever;" Copeland, on "powerful blood changes;" West, on "exanthemata;" Virchow, on "erysipelas." "It is known that the urine may become temporarily albuminous in consequence of an excess of albumen in the blood" (Dickinson, Wood's Library).

"These different views are not reconciled even at the present time; while many physicians to-day read the term albuminuria as an equivalent for kidney disease, there are others who attribute some, if not all, such cases to an altered condition of the blood" (Ziemssen's "Cyclopædia," vol. xv.).

As all renal diseases do not produce albuminous urine, so albuminous urine is not, *per se*, an evidence of renal disease. Among the varied pathological conditions outside the kidneys that give rise to albuminuria, my attention has been called of late to two cases, where daily examinations, careful investigations, and varied tests seemed to prove that the albuminuria (in said cases) was not produced by, or dependent on, any pathological changes in the kidneys themselves, but upon some gastric or hepatic disorders.

CASE I.—Mr. K——, merchant, aged twenty-four; nervous, bilious temperament, mentally depressed, constipated, voracious appetite, palpitation, throbbing of arteries, with daily excretions of albumen in the urine.

He was treated as follows: Hepatic stimulants, Turkish, salt, and electro-thermal baths; electricity applied to the hepatic region produced considerable pain. After one week's treatment, *some* specimens of urine exhibited a diminished amount of albumen; *others* remained the same.

After two weeks *some* specimens contained none, yet within twelve hours the usual amount would reappear. He was still eating enough for two well men. Diet was now cut down one-half, when a marked change in the urine appeared. Urea increased; lithates and albumen diminished. After two months, albumen could no longer be detected.

CASE II.—Mr. K——, aged thirty-five, of bilious temperament; yellowish, lead-colored, rough, and dry skin; poor appetite, constant bad taste in mouth; flatulence, and constipated from youth. For months has had no movements save by the use of extraneous means, and often goes a week without being able to secure a movement from the bowels. Great tenderness over the liver and epigastrium; subject to chills and often night-sweats, with much muscular pain, nervous prostration, and mental depression; urine scanty, high colored, of high specific gravity, and loaded with lithates; albumen constant and clearly marked. He gave up his business last October, and consulted Professor Timothy F. Allen, of New York, who treated him one month.

He then consulted Professor E. L. Keyes, who took charge of his case.

Was brought here in March following, with the above symptoms. He was put upon a relaxing and depletory treatment, Turkish and electro-chemical baths, alkaline salts, and amylaceous food, with colocynth and hydrargyrum pills sufficient to secure a movement from the bowels once in two days, with stimulating packs over stomach, bowels, and liver. In two weeks his skin and color began to clear up, and in three weeks there was not a trace of albumen in the urine; had gained several pounds of flesh, and walked around very well.

Now, while there has been constant and considerable albumen in the urine since October 1st—seven months—and we know not how long before, we have been unable to discover the slightest evidence of any structural changes in any of the renal organs. Where, then, must we look for the source of the albumen? Not in the nervous system, for they presented neither of the nervous conditions known to give rise to albuminous urine; not in any organic lesion of the heart, for they had none; not in any febrile condition that sometimes for a limited season produces albuminous urine; but we may look for it in line with their prominent and harmonious symptoms of gastric and hepatic disorders. We may search for the cause of *this* symptom where we look for the cause of their other symptoms. That the albumen is associated with, and dependent upon, hepatic and gastric disorders is incontrovertibly substantiated by the positive relief afforded by the hepatic and gastric treatment employed. This line of reasoning is abundantly established by Prout, Cohnheim, etc. Exactly *how* albuminous urine is produced in these cases is not yet clear, but the fact is authorized by Carpenter, Bennett, Dalton, and others. The same may be said of chyluria and glycosuria. "There are also reasons for believing that albuminous urine may be induced by hepatic derangements, independent of structural disease of the kidneys. I have met with several instances of hepatic colic, but where there was no jaundice, and the paroxysm was followed by a temporary increase of lithates and albuminous urine" (Murchison). Dr. Parkes ("On the Composition of the Urine") thinks, through some failure in the preparation, either by the stomach or liver, crude albumen is introduced into the circulation and excreted by the kidneys. Claude Bernard found that crude albumen injected into the jugular vein produced temporary albuminuria. "It is well known that if two or three raw eggs are eaten at once, albumen makes its appearance in the urine" (Fothergill).

This last quotation is in line with the above reasoning, but must be limited to cases of gastric and hepatic disorders; as experiments show that in such cases, and such only, does the eating of raw eggs produce albuminous urine. To test this truth I ate at one meal six rare-cooked eggs, and made a careful test of the urine at four and eight hours afterward. Then I ate at one meal twelve hard-boiled eggs, and tested as before. Then I ate at one meal six raw eggs—in all, twenty-four eggs in twenty-four hours, but not the slightest trace of albumen could be found. After repeated tests of this kind upon myself, and similar ones on others, I assume that albuminous urine cannot be produced where there is a healthy state of digestion with a free portal circulation; and had Claude Bernard injected crude albumen into the circulation on the other side of a healthy liver he would not have found it in the urine. Claude Bernard's experiment is valuable in the discussion of this subject, in that it shows that crude albumen may be excreted in the urine. And thus we are brought one step nearer to the solution of this question, namely: *that albuminoids passing through the digestive process, in excess of the powers of the liver to deal with them, may produce albuminous urine.* As an excess of lithates in the urine may indicate defective powers of the liver, instead of defective metamorphosis of tissue (for they have never been tissue), so albumen in the urine may indicate not a degeneration of tissue (for it never was tissue), but defective metabolism in "liver indigestion," and both are aborted proteids, wrecked on their way by defective digestion and assimilation.

A pertinent question here arises. What is the character of the albumen in hepatic albuminuria? Is it egg albumen (Fothergill)? is it globulin (Lehmenn)? is it a peptone (Lander-Brunton)? If it were egg albumen, it could be positively distinguished by the use of ether in the test. For while this secretion of the fowl's oviduct resembles albumen in the blood-serum, and while its action under heat and nitric acid is virtually the same, yet egg albumen is precipitated by ether, while the albumen of the blood-serum is not. If it were globulin, or "latent urine albumen," it could be shown by the use of alcohol in the test, but not by boiling or by nitric acid. If it were peptones, it would not be coagulated by heat or nitric acid in the test.

Traces of albumen in the urine are often unnoticed, because of imperfect examinations.

1. The test-tubes should be perfectly clean, else both the character and appearance of the urine may be changed.

2. The urine should always be rendered slightly acid by the addition of a few drops of dilute acetic acid, as albumen is held in solution in alkaline urine, notwithstanding the application of heat.

3. A few drops only of nitric acid should be used, as an excess of it redissolves albumen. Egg albumen is not redissolved, except in part, by an excess of acid.

4. Latent albumen (Gerhardt) is not discovered by heat or nitric acid, but is precipitated by alcohol.

5. Albuminose in the urine is not coagulated by ether, heat, or nitric acid, but only by the metallic salts and alcohol in excess.

6. Albumen in the urine, first rendered slightly acid, is readily discovered by the addition of a few drops of a solution of potassium ferrocyanide, one of the most delicate of tests.

From the above clinical cases, statistics, and considerations, we draw the following conclusions:

First.—Crude albumen in the circulation may be excreted as such by *healthy* kidneys.

Second.—Crude albumen in the circulation may arise from a retrograde metamorphosis of albuminoids in the process of digestion and assimilation from liver *disease.*

Third.—Crude albumen in the circulation may arise from a luxus consumption of albuminoids in excess of the capabilities of a *healthy* liver.

Fourth.—Crude albumen in the urine denotes that albuminose, in its hidden course to its legitimate and ultimate end, viz., fat and urea, has escaped its proper destiny as an aborted proteid.

Fifth.—Crude albumen in the circulation denotes not a defective metamorphosis of tissue, for it has never been tissue, but a defective metabolism in tissue construction.

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THE BRITISH MEDICAL ASSOCIATION.

THE meeting of the British Medical Association this week, a cabled report of which we present in this issue, was a remarkably successful one, not only as to attendance, but as to the subjects of scientific interest which were discussed. In point of numbers and representative character, there is probably no scientific association in the world that is its equal. Its organization is so simple and withal so perfect that its membership embraces the leading and working men throughout the kingdom, and gives it a proportionate influence for good, not only with the medical profession, but the public at large. This latter effect is in no small degree due to definite and concerted action in all matters not only pertaining to advancement in medicine, but to everything scientific and sanitary which effects medical legislation. Hence the profession of that country naturally look to the Association for such expressions of opinion as shall be forcibly direct as well as widely representative.

It is a matter of great congratulation with its many friends that the Association is prospering from year to year, and that its actual membership reaches into the thousands. One reason for the latter is possibly that there is no other organization in the country which can claim to compete with it, and that it combines in its general branches every element for effective work, and focuses the united energies of the most progressive medical and surgical minds. The addresses—of which Dr. Redfern's, in the present issue, is a type—are, as a rule, models of their kind, showing much study, patient research, and wide grasp of the subjects treated. This is no more than could be expected considering the care with which the orators are selected, and the necessary incentive for the best efforts on the part of the gentlemen so honored. The section work is also carefully looked after, and not only are the topics for discussion systematically advertised in advance, but the proper men are duly selected to present them. This gives ample opportunity for due preparation, and naturally invests the scientific proceedings of the Association with proper interest. The addition of a new section, on therapeutics and pharmacology, is a notable feature of improvement, and gives an earnest of the intention of the members to devote themselves to the study of a branch of our science which has of late been too much neglected by progressive investigators. There is already promise of much good work in these branches, and the importance of the same in its general bearing upon the future progress of medicine was properly enforced by the remarks of the learned president of the Association in his annual address.

Probably nothing has shown the influence and power of such an Association more than its practical demonstration of the utility of systematizing a collective investigation of disease. By means of its extensive machinery and its perfect system of organization, it can command the means to an end which cannot be equalled by any similar body. The work already done has been highly satisfactory, and we opine that each successive year the elaborate report of the committee on the collective investigation will grow in importance, and increase in interest accordingly. At least, so far, it shows what can be done in a proper direction, and should encourage similar committees to surmount what are, after all, only ordinary obstacles.

In thus reviewing the work and influence of the British Medical Association, it behooves us to utilize, in behalf of our own National Association, the lessons which it teaches. In a general way this can be done with great profit to us. There are certain drawbacks, in regard to organization and representative character, which will however be next to impossible to surmount. Great Britain is, comparatively speaking, a small country, and concentration of medical talent within a reasonable area is not impossible. On the other hand, thousands of miles separate the members of the American Medical Association. There are here certain elements that militate against continuous annual attendance upon the meetings, which are very serious ones to consider. Hence it follows that a new set of members make up the majority of those in attendance at each session. Some attempt has been made to overcome this tendency by the biennial meeting at Washington, but even this latter city is by no means central in location, and cannot be reached by the larger number of delegates in the West and Far West without great expense and without serious loss of time. Again, the incentive which obtains with our British brethren, within their easy travelling distances, of being called in consultation, does not exist with the larger number of the best men so widely scattered over our vast territory. Hence the tendency is for the leading men in different parts to do their best work in their district societies, and as a rule leave the so-called parent association to take care of itself in its own way.

It can hardly be necessary, in view of the example set us by our cousins, to urge the necessity for a better programme for section work. It has become too much the fashion with chairmen of sections here to seek papers from such as may find it convenient to come, rather than from such as should feel it their duty to come and contribute what they can to the interests of the sessions. There was an exception to this rule in some of the sections which met this year in Washington, notably in that of the Section on Medicine, but not enough, generally, to give us very sanguine hopes for desirably radical departures.

But from all this it must be understood that our best men are not backward in doing their work to suit their own purposes. Their local and State societies absorb a great deal of this, but their best efforts are expressed in contribu-

tions to our leading medical journals, which are very properly recognized as the best media for rapid and extended communication with all the leading centres, and with large circles of appreciative readers. In respect to thus utilizing information from widely scattered regions, we certainly excel our cousins, and in no small degree offset the necessity of a national association for the distribution of intelligence such as they possess.

But, after all, how to practically overcome the peculiarly inherent difficulties in the organization and work of our own association is not an easy matter. The British example cannot be followed throughout, for reasons already suggested. Interpreting the signs of the times, we may say that the tendency in this country is toward State rather than National society work.

THE SCIENTIFIC GRANTS REPORTS OF THE BRITISH MEDICAL ASSOCIATION.

THE series of reports from committees to which sums of money had been granted by the British Medical Association begins this present year with the report of Mr. G. F. Dowdeswell, on the "Intimate Nature of Contagium in Certain Acute Infective Diseases." Mr. Dowdeswell prefaces his report with a review of the present status of scientific opinion as to the relations of micro-organisms and infective diseases.

There are now two distinct schools of schizomycologists: one, represented by Cohn, Koch, and others, uphold the doctrine that a difference of either form or function is sufficient to establish a distinct species, and that these different species are constant, and do not merge into each other. The other school, represented by Von Nägeli, Billroth, Lankester, and indirectly by Pasteur, contend that these different morphological and physiological forms are merely developmental phases of the varieties, brought about by external condition of a very few distinct species.

Mr. Dowdeswell's investigations relate largely to the above points. He examined experimentally into the relations of micro-organisms to Davaine's septicæmia, and Pasteur's so-called septicæmia, or infective peritonitis (also known as Koch's "malignant œdema"). We would remind our readers that the specific septicæmia of Davaine is that produced by the injection of putrid blood into the subcutaneous tissue of healthy animals. Mr. Dowdeswell's experiments showed that this infection is the result of the presence of a special pathogenic organism, resembling *b. subtilis*, that the disease is unquestionably a specific septicæmia, not a septic intoxication, and that by successive inoculations of the blood of one diseased animal into another, the *virulence of the blood is not increased.* This is in opposition to the views of Coze and Feltz, and of Davaine, and so far as it goes tends to show that micro-organisms do not change in physiological function.

Pasteur's septicæmia, or "infective peritonitis," is a disease produced by injecting putrid matter into the abdominal cavity. An inflammatory exudation results, containing numerous micro-organisms, and this exudation when inoculated in other animals produces serous effusion, septic intoxication, and death. Mr. Dowdeswell found as had Sanderson and Klein, that the injection of a germ-free chemical irritant into the abdominal cavity also excited similar infective peritonitis. The micro-organism developing in these cases had already been described by Koch, who called it the "bacillus œdematis," and states that it is to be found on wet soils and is a common saprophyte, appearing where decomposition takes place, like *bacterium termo.*

Mr. Dowdeswell's conclusion regarding infective peritonitis is that it is not a specific septicæmia, but rather a septic toxæmia in which the micro-organisms play a subordinate and probably mechanical part. There is no increase of virulence here either in successive inoculations.

It is difficult in the short space at our disposal to give any fuller account of the report. It contains much else that is instructive and suggestive, and shows its author to be a careful and judicious investigator. It is only to be regretted that the work was not pushed a little farther in the lines wherein it was begun.

The second report is that of Dr. George Thin, upon "Leprous Infiltration of the Epiglottis, and its Dependence on the Bacillus Lepræ." It can be disposed of very briefly. Dr. Thin believes, if we understand him correctly, that the *bacillus lepræ* is the pathogenetic agent of leprosy. He relates the history of a case, and shows specimens illustrative of the mode in which this parasite acts. Its special home is the lymph or white-blood corpuscles. It migrates with these, modifies their activity, causing absorption of fibrous tissue, production of tubercles, and a low grade of inflammation. We can hardly agree with Dr. Thin that sufficient data yet exist to enable us to say that the bacillus is the cause of leprosy. His contribution to this subject is, however, a most important one.

Dr. W. North makes a report upon the "Influence of Bodily Labor upon the Excretion of Nitrogen." His conclusions have already been published. They in the main corroborate those of Dr. Parkes, and disprove again the crude investigations of Flint, Jr., in the same direction. We must say of Dr. North, however, that his work is very blindly and unintelligibly reported in the *British Medical Journal.*

THE PATHOLOGY OF THE CERVICAL SYMPATHETIC.

DR. PAUL JULIUS MÖBIUS has written an elaborate monograph (published serially in the *Berliner Klinische Wochenschrift*) upon the pathology of the cervical sympathetic. This interesting but mysterious part of human anatomy has received a great deal of attention of late years, yet its exact relations and functions are still far from being satisfactorily made out. Dr. Möbius, besides giving a critical review of previous contributions, furnishes something new in the shape of a unique case of paralysis of the cervical sympathetic produced by a knife-stab. The sharp blade entered the right side of the neck just below the angle of the jaw, and apparently cut the sympathetic cord entirely in two. There was very little bleeding and the wound rapidly healed, but the patient soon discovered that there were various disturbances of function upon the right half of his face.

His right eye tired easily, and became suffused with tears; the pupil was smaller; the lid-fissure narrower; the ocular skin-reflex on the right side (*i.e.*, the widening

of the pupil on strong irritation of the skin of the neck) was absent, the right eye was more moist and more easily injected. The face was no redder or more congested or moist apparently upon the right side than upon the left; but slight irritations easily produced right-sided flushings and sweating. The temperature in the right external auditory meatus was higher than that in the left (36.5° C. to 35.6°).

The right musc. risor. Santor. and platysma were a little paretic, and the right angle of the mouth hung lower than the left. The heart's action appeared normal and the patient did not suffer from vertigo, tinnitus, headache, or sleeplessness. He did have at times a disagreeable sense of feeling the beating of his heart. Applications of electricity to the neck produced no change in any of these symptoms.

We have related the history of this case because it shows very typically most of the phenomena which occur in one-sided paralysis of the cervical sympathetic. Slightly different symptoms, or a difference in predominance of special symptoms, naturally occur according to the location of the lesion. We may, however, sum up those symptoms which have been found in the cases reported by Seeligmüller, Nicati, Eulenburg, Mitchell, and others, as follows: 1. Myosis is always present in the eye of the affected side. The pupil may be one-half or two-thirds smaller than that of the other eye. It responds to light and to accommodation, but its motion may be slower than normal. 2. Narrowing of the palpebral fissure through paralysis of the muscle of Müller is almost always observed, *i.e.*, in thirty-five out of thirty-nine cases. 3. Sinking in of the bulb occurs more rarely and is a later symptom. It is due to absorption of orbital fat, and to paralysis of Müller's muscle. The tension of the bulb sometimes becomes less and the cornea flattened. 4. There is, quite uniformly, an increased temperature and redness on the affected side of the face. Sometimes the affected half simply flushes very easily on the application of slight stimuli. A few cases have been reported by Nicati in which the blanched face and lowered temperature have occurred along with the eye-symptoms of paralysis. 5. A decreased sweating of the affected side often occurs. 6. Slight trophic changes may occur, the subcutaneous fat becoming absorbed, but it is doubtful if true atrophy ever takes place. In paralysis of the cervical sympathetic on one side the heart's action is not slowed, the thyroid gland is not enlarged, and there are no distinctive cerebral symptoms, such as might be expected to occur in a vaso-motor paralysis of those intracranial vessels supplied by the sympathetic.

Dr. Möbius confines his attention chiefly to the subject of sympathetic paralysis, and seems inclined to think that this includes most of the pathological disturbances of the nervous strands in question. Only thirteen cases of true sympathetic irritation are cited. In these there was widening of the pupil, moderate exophthalmus, and accommodation paresis, coolness of the face on the diseased side, and increased heart's action. Seeligmüller noted a flattening of the cheek and dilatation of the pupil in two cases.

Möbius very correctly excludes from the category of cervical sympathetic diseases, migraine, Basedow's disease, angina pectoris, and progressive unilateral atrophy of the face. It is to be hoped that our teachers and textbook writers will soon become sufficiently advanced in nervous pathology to follow Möbius' example.

THE INFLUENCE OF THE CHOLERA EPIDEMIC.

No one can doubt that the present epidemic of cholera will have, and indeed has already had, an immense influence for good in the sanitary education of the people. There is no one thing about which doctors disagree less than that of the relation of filth to cholera. And everything in the history of the present epidemic has tended to enforce the lesson of the great need of municipal and individual cleanliness. Without filth no cholera, is the motto which has been learned from the past, and which has for the last six weeks been steadily inculcated by medical authorities.

The result is that throughout Europe and the United States there has been an amount of municipal scrubbing which is quite unprecedented in summer history. For, since the cholera epidemic of 1866 and 1873, sanitary organizations have increased in number and effectiveness, while the people have been educated to a more intelligent idea of their functions and usefulness. There is no doubt that the extra cleanliness produced by the cholera scare will effect a saving of life from other filth diseases far in excess of the mortality from the cholera itself, unless indeed it should spread beyond all expectation.

There is no paradox, therefore, in saying that the cholera in France has a beneficent side, and will eventually save more lives than it destroys. We might even assert that cholera is a disease which the people cannot spare quite yet from the world. It is needed as an educator and as a prophylactic against typhoid, diphtheria, and the other diseases that proceed from municipal filthiness.

THE BATH IN MISSOURI.

Dr. W. E. Scott relates (*St. Louis Courier of Medicine*) the case of an old Missourian "who hadn't been wet all over since '63." Following up with inquiries this alarming suggestion of uncleanliness, Dr. Scott reaches the conclusion that there is not one-third of the people of Missouri who average one bath per month, and again "there are at least fifty per cent. who do not take a full bath from October till the month of May!" This condition of things is not, says Dr. Scott, peculiar to Missouri. In these days of "health hints," hygienic handbooks, and sanitary propagandism, it is rather startling to learn that in the very home of "Listerine" half the people do not bathe from fall to spring, while a certain limited number have not been wet all over since 1863!

Suicide of an Epileptic.—Medical men can appreciate the state of mind which had been reached by the young man who shot himself in this city last week. For a number of years he had suffered from epilepsy. He had been treated by several prominent physicians, but had got no better. He found himself, on the eve of marriage, a confirmed epileptic with no hope of improvement held out and so he killed himself.

News of the Week.

Yellow Fever is said to be increasing at Panama. It has also appeared at Sonora, Mexico, and is spreading rapidly.

An Honor to Dr. Husted.—At the Annual Commencement recently held at the Syracuse University, the honorary degree of LL.D. was conferred upon Dr. N. C. Husted, a well-known and esteemed physician of New York City.

Dr. E. W. Jenks was the recipient of a cordial reception by his medical brethren on the occasion of his return to Detroit. This high compliment was well deserved, and the profession of that city did itself credit in tendering it.

The Illinois State Board of Health is now engaged in revising the "Register of Physicians," preparatory to publication. Any changes or corrections should be promply sent to the Secretary. Lists of the officers of the medical societies in the State are also requested.

Annual Meeting of the National Board of Health.—The National Board of Health held its annual meeting on July 30th, and elected officers for the ensuing year as follows: *President*—Dr. James L. Cabell, of Virginia; *Vice-President*—Dr. Stephen Smith, of New York; *Secretary*—George E. Waring, Jr., of Rhode Island; additional members of the Executive Committee—the Hon. Thomas Simons, Department of Justice; Dr. Charles Smart, United States Army, and Dr. T. S. Verdi, of Washington. A resolution was adopted that in view of the possible invasion of the country by cholera, and of the existence of epidemics of other diseases, and in view of the duty imposed upon the Board by law to obtain information on all matters affecting the public health, the Executive Committee is directed to put on duty such members of the Board as in its judgment may be necessary. At its subsequent meeting the Executive Committee directed that the members of the Board be placed on duty for the investigation of all matters which, in their judgment, have a direct bearing on the question of cholera as a present menace to the public health, and epedemic of other diseases existing in the country. Congress having failed to make appropriation for the purpose, it is understood that such duty is to be done without compensation.

Texas Fever among Western Cattle.—A consignment of cattle from Indian Territory was received at Kansas City and kept in the stock yards in that city for some days. They were then shipped, part to Manhattan, part to Chicago. Of 200 sent to the former place over 30 died of what seems to be Texas fever. Of 500 sent to Chicago, a large number were attacked with the same disease, and the whole herd has been isolated and killed.

New Facts as to the Cause of Death by Chloroform.—Professor K. Winogradow has reported to *Wratsch* the discovery of peculiar changes in the nervous ganglia of the heart in a person who died from the effects of chloroform. He believes that they throw a new light upon the cause of death in these cases.

Honors to Medical Men.—Professor Le Fort and Dr. Dumontpallier, of Paris, and Professor Tourdes, of Nancy, have been given the cross of the Legion of Honor. Dr. Paul Flechsig has been made ordinary professor of Mental Diseases at Leipzig. Professor Longmore, of Netley, has just been elected corresponding member of the Académie de Médecine.

The most Unique Medical Journal at present published is probably *Le Journal Médical Quotidien*. It is published daily, as its name implies, at Paris. All the matter is written out in excellent script, and this is then lithographed. The journal is autographic, therefore.

The International Otological Congress.—We have received a copy of the programme of the Third International Otological Congress, which meets at Bâle, Switzerland, on September 1st to 4th, 1884. Dr. Alb. Burckhardt-Merian, President, is also chairman of the organization committee. A list of thirty-nine promised communications is given. We observe that no Americans and only one Englishman are among the contributors.

The Late Guiteau.—Dr. Michael J. Madigan has been attempting the fresh and always interesting task of proving Guiteau insane. Dr. Madigan announces himself to be a cerebro-physiologist, and is doubtless very competent to tell, all too briefly, what is the truth about Guiteau. We venture to suggest to him, however, that he has a singular ignorance of certain well-established logical methods, and that, for instance, he can never prove Guiteau insane by showing that the editor of this journal is "only a surgeon." For the rest, the single sensation, aside from weariness, which this young man's polemic excites is a wonder that at this late date the Guiteau question cannot be discussed without personalities and passion.

The Death of Professor Jäger, the distinguished ophthalmic surgeon, of Vienna, is announced.

The Treatment of Cholera at Marseilles and Toulon is about the same, according to the *Times* correspondent. In the first stage, twenty drops of laudanum are given with three grammes of ether, and ice in the mouth to stop the vomiting. In the second stage, from ten to fifteen grammes of acetate of ammonia, the same quantity of alcohol, and injections of morphia are given. If the patient has embarrassed breathing, oxygen is inhaled and the limbs are rubbed with turpentine. The third stage is the coffin.

Progress of the Cholera.—There seems to be no doubt that the violence of the cholera is abating at Marseilles and Toulon. The deaths, according to Consul Mason, have fallen at Marseilles from an average of sixty, previous to July 22d, to between twenty and thirty on July 30th. At Toulon the daily average has fallen from forty to fifteen. On the other hand, the epidemic has spread to numerous small places, about two thousand in all, in the country about Toulon and Marseilles, and has appeared in an active form at Aix-les-Bains and at Arles. The disease has also crossed the Italian boundary and appeared in several small towns and villages. Up to the present time there have been about two thousand three hundred deaths in France from cholera, according to an estimate of Mr. Harold Frederic, the *New York Times*

correspondent. This same correspondent has furnished a very clear and instructive account of the state of affairs in the cholera-stricken cities, and shows very clearly the intimate relation between cholera and filth.

Of Toulon, he writes: "The city itself is situated on a flat plain, four feet only above the level of a tideless sea. The consequences arising from imperfect drainage, with a natural want of slope, are that the sewers have only a fall of eighteen inches, so, with a sluggish movement, the filth of the town drops into an almost stagnant sea. What is worse is that at the points where these drains flow they are only covered with plank, and the filth, disgusting to the nose, impresses itself on the eyes. You not only then smell, but you see, the garbage of Toulon. Just fancy people living in this city, of quite eighty thousand inhabitants, without the faintest glimmer of common sense in regard to public hygiene! Toulon must be inhabited by people who utterly ignore every precaution which health requires. Their habits, both in their houses and in the public streets, are indescribably filthy. Toulon has always been a breeding-place of disease. Small-pox when it broke out in Toulon was always of a malignant type, and more difficult to stamp out than elsewhere."

The patients at the hospitals in Marseilles and Toulon are nearly all from the lower classes. At first nineteen-twentieths of the patients died; later, the mortality became less frightful.

Dr. Koch's Report to the German Government on the cholera epidemic in France was made July 5th. The disease, he says, is undoubtedly of Asiatic origin, and the milder form of the malady, spoken of by Toulon medical men, is nothing but severe cases of diarrhœa. But, in reality, writes Dr. Koch, the disease is of a very violent form, and is making rapid progress. In examining the bodies of some patients, he found the cholera-bacillus. The fact that hitherto the plague has not spread extensively in the neighborhood of Toulon is due, he thinks, to the hilly character of the region, which was also less rapidly and severely infected on the occasion of previous cholera epidemics there. Finally, Dr. Koch expresses his conviction, based on past experience, that the Asiatic cholera now raging in the South of France, will also extend itself to the Continent of Europe. Immediately on the arrival of the report at Berlin the various Federal Governments were requested to take the necessary preventive measures against the spread of the disease to Germany.

Dr. Koch's Lecture on Cholera at Lyons.—At the request of the Lyons authorities, Dr. Koch while in that city gave a free lecture on cholera. He showed specimens of the bacilli. They were, he said, favored in growth by alkalies and killed by acidity or dryness. Three hours of dryness he thought mortal to them. They were inoffensive in the lungs, and to be baleful should be carried into the stomach. Opium he thought the best for early treatment. A strong stimulant might be useful later, but he was not, he said, able to indicate one. Chloride of zinc, sulphate of iron, and even mercury, were not efficacious, but he thought carbolic acid was. Nevertheless, he often washed his hands in Van Sweiten's fluid, which contained a thousandth part of bichloride of mercury. When it was observed to him that the past immunity of Lyons from cholera was at variance with his theory of dryness, the climate being damp and the city on a tongue of land where the Rhône and Saône meet, he ventured to think that freedom from epidemic was probably due to the excellence of the sewers. At the same time he feared that Lyons was too near by rail to Marseilles and Toulon to be spared this time. Cholera rarely attacked those the coatings of whose stomach and intestines were healthy. There was no greater predisposing cause among the healthy than fear, which at once affected these organs. Scouring floors and furniture was not nearly so good a preservative as polishing and frequent dry rubbing.

A Hygienic Institute in Berlin.—It is proposed to found a Hygienic Institute in Berlin, in connection with the Berlin University. Professor Koch will be placed at its head.

The University of Heidelberg is about to celebrate its five hundredth anniversary. The Baden Parliament has voted $40,000 to meet the expenses of the occasion.

Cholera Cures.—Naturally, the appearance of the cholera in Europe has led to the revival of various specifics or specific methods for curing cholera. The first to be brought to notice was the use of oxygen by inhalation. It was speedily shown, however, that this agent did little or no good. M. Paul Bert has revived the claims as to the utility of copper as a prophylactic and curative agent. He has adduced fresh evidence, as he thinks, of its value. But with the memory of the death of M. Thuillier still fresh in mind, it will be hard to excite any confidence in the prophylactic value of this metal. Prof. S. Samuel, of Königsberg, Prussia, calls attention, in the *Berliner Klinischer Wochenschrift*, to a treatment of cholera recommended by him a year ago, viz., the subcutaneous injection of warm saline solutions. He admits that the circulatory apparatus in cholera is like a sieve, and that injections directly into the veins are soon lost; but by injections into the subcutaneous tissue of the arms and chest he claims to have obtained excellent results. He cites a case in which seven ounces of water, and subsequently four and a half ounces, were thus injected with success. The treatment by applying ice-bags to the spine, in order to stimulate (or relax) the ganglionic centres, has also been again brought up for discussion. No certain conclusions regarding this method have yet been reached. Among other "cholera cures" that are of more or less historic interest, are: the injection of quinine into the veins; the plugging of the anus; the actual cautery over the kidneys; and the administration of large doses of sugar (to affect endosmotic changes in the intestines); asafœtida, capsicum, calabar bean, quassite, berberine, naphtha, phosphorus, sulphur, and various antiseptics have been at different times recommended as useful in cholera. Finally, Dr. W. C. Seaman has recently advocated in *The Lancet* a return to the use of calomel in gr. x to gr. xx doses, with cold affusions and subsequent friction.

Dr. Kidd's Address on Obstetric Medicine, delivered before the British Medical Association, is unavoidably crowded out of the present issue, and will appear in our next.

Reports of Societies.

British Medical Association.

FIFTY-SECOND ANNUAL MEETING,

Held in Belfast, Ireland, Tuesday, Wednesday, Thursday, and Friday, July 29, 30, 31, and August 1, 1884.

(BY DIRECT CABLE TO THE MEDICAL RECORD.)

TUESDAY, JULY 29TH—FIRST DAY.

THE Council met at 2 P.M. The first general meeting was held at 3 P.M., the retiring president, DR. A. T. H. WATERS, of Liverpool, in the Chair.

The minutes of the previous meeting were next read, as already published, and confirmed.

REPORT OF COUNCIL.

MR. C. G. WHEELHOUSE, of Leeds, Chairman of the Council, spoke of the increase of membership during the past year, which was over one thousand. The total number was now nearly

TWELVE THOUSAND MEMBERS.

Very few members had died during the past year. The Association was now in a prosperous condition with

A SURPLUS IN THE TREASURY,

and was increasing in influence and in representative character. The report after some discussion was adopted.

Mr. C. MacNamara, of London, was then elected Treasurer of the Association; vice Mr. W. F. Wade, of Birmingham. Mr. Wade was thereupon elected Vice-President for life.

DR. MCVAIL made a motion to the effect that the travelling expenses of members of the Council be paid by the Association. A long discussion ensued in regard to the propriety of such a measure. It was contended that as each branch association now sends a member to the Council that the aggregate tax upon the Association would be large; especially would this be the case with members from the more distant parts of the kingdom. The pay system would be no extra inducement for attendance. The motion was finally lost.

FIRST DAY—TUESDAY—EVENING SESSION.

The Association was called to order in pursuance of previous adjournment.

ADDRESS OF RETIRING PRESIDENT.

The retiring President, DR. A. T. H. WATERS, of Liverpool, made a brief address. He spoke of the changes that had been made in the character of the Council, so that it had become more representative. He believed that this would tend to increase the prosperity of the Society. He congratulated the Association upon its continued growth and present flourishing condition. He referred briefly to the subject of the medical bill which had been before Parliament during its present session, and had been the subject of much sharp discussion. He lamented the fact that it had been withdrawn, and that the prospects for medical reform were again postponed. In conclusion, he thanked the Association for the honor it had paid him in electing him to the presidency.

A vote of thanks was then tendered the retiring president, carried unanimously, and Dr. Waters was elected Vice-President for life.

Dr. Waters then resigned the chair in favor of Dr. Cuming, President-elect, who delivered his

PRESIDENTIAL ADDRESS.

DR. CUMING gave a cordial welcome to the visiting members on behalf of the profession at Belfast. He expressed his thanks also for the honor paid in electing him to the presidency. He then said that the present epidemic of cholera in France naturally brought up the subject of the sanitation of cities, and of Belfast in particular. The sanitary condition of Belfast was excellent except that the sewage polluted the harbor to a somewhat dangerous extent.

The subject of

MICRO-ORGANISMS

and their relation to disease was next considered.

Dr. Cuming contended that minute organisms underwent changes in character as do other animal forms, and in that way very likely determined the character and extent of epidemics. The old term, "epidemic constitution," could be explained on this theory of the modified life of micro-organisms. But in addition to the influence of micro-organisms there is something in the human body which modifies vital phenomena, whether normal or abnormal, and this was the diathesis. That there was this peculiar modification of vital activity was abundantly shown, and the recent studies in scrofula and phthisis had still more strongly confirmed it.

The President then dwelt upon the advantages to be expected from the newly created

SECTION ON PHARMACOLOGY AND THERAPEUTICS.

Much progress was now being made in these branches, and much more could be expected. Medicine could never be cultivated in the same lines with the physical sciences. There are too many elements of uncertainty or too many complex factors. But in the great art of relieving and preventing suffering more and more was being accomplished, and the medical profession was every year becoming one of more dignity and usefulness.

At the close of the address various proposed amendments to the by-laws were discussed, but no important motion was carried.

The Association then adjourned for social reunion.

WEDNESDAY, JULY 30TH—SECOND DAY.

The meeting of the Council was held at 9.30 A.M.

Dr. Balthazar Foster was elected President of the Council, vice Mr. Wheelhouse. The latter gentleman was elected Vice-President of the Association for life.

The second general meeting was held at 11 A.M.

DR. LEWIS A. SAYRE, of New York, gave a demonstration of the application of the

PLASTER JACKET

in diseases of the spinal column. Dr. Sayre showed the

methods of applying the jacket, and asserted the advantages of it over later so-called improvements.

Dr. William M. Ord, of London, delivered the Address on Medicine. His subject was

SOME PERVERSIONS OF NUTRITION CAUSED BY THE NERVOUS SYSTEM.

Many observers of late years had been contributing evidence to show that the nervous centres have a remarkable power over the processes of nutrition. Charcot, Weber, and others had suggested that chronic rheumatic arthritis was a nervous disease. That the arthropathies in tabes dorsalis were produced by nervous influence there could be no doubt. The speaker suggested that in these cases there was probably some lesion in or near the anterior cornua. He related the history of a very interesting case of progressive muscular atrophy in which there was a joint lesion.

Dr. Ord referred to the changes in opinion which had taken place by reason of observations like the foregoing and a closer study of the nervous system. When Sir James Paget's book first appeared it was laid down that all general diseases were of blood origin. Now it could not be denied that this view must be greatly modified. He had noticed many illustrations of the reflex and direct influence of the nervous system upon nutrition. He had seen uterine congestion produce, reflexly, irritation of joints, and even rheumatic inflammation. On treating the womb these symptoms disappeared. The speaker also instanced cases of

URINARY PARAPLEGIA,

in which paralysis was produced reflexly by disease of the urinary organs. The influence of the nervous system upon secretion was undoubtedly a very marked one and showed itself in a variety of ways. Fetid breath might be the result of a secretory dystrophy or nutrition perversion. The influence which mental disturbances have upon the secretion of milk is familiar to every one. The nervous system regulated the destruction of sugar in the body, and not infrequently exhausted or perverted conditions of this system resulted in temporary "non-diabetic" glycosuria. As this often occurred in persons of a gouty tendency, Dr. Ord suggested the term

GOUT OF THE LIVER.

The speaker discussed the subject of the relations of myxœdema to the nervous system, and the probability that this too was a nervous disease. He referred to Kocher's views on the subject.

Dr. Ord made the original suggestion that the thyroid gland was a trophic organ, and, perhaps, ruled the nutrition of the nervous system in a measure.

He referred in graceful terms to the debt which was owed to Dr. Weir Mitchell, of Philadelphia, for his contributions to the subject of the nervous system and nutrition.

At the conclusion of the address, Dr. A. T. H. Waters moved that a vote of thanks be tendered the speaker.

The motion was seconded by Dr. Gairdner and unanimously carried.

After the transaction of some miscellaneous business the meeting adjourned for the day.

REPORTS OF SECTIONS.

SECTION ON SURGERY.

Wednesday, July 30th—Second Day.

The Section on Surgery was called to order at 2 P.M. by Sir William MacCormac, President, who delivered an address

ON ABDOMINAL SURGERY,

in which he reviewed the advances made in that department during the past few years. Every part of heretofore forbidden ground had been boldly and successfully attacked by the surgeon, and visceral surgery had enlarged its domain of applicability beyond the most sanguine expectations of the most progressive of our forefathers. He particularly referred to gastrostomy as an operation which had for itself a brilliant future in properly selected cases. The radical cure of hernia was another topic dwelt upon by the speaker, who cursorily considered the different operations and the indications for their performances. The removal of the thyroid gland also claimed attention as a feasible operation in many cases heretofore allowed to drift along unrelieved.

Following the address was the discussion on

THE PLASTER-OF-PARIS JACKET IN THE TREATMENT OF SPINAL DISEASES,

opened by Dr. L. A. Sayre, of New York. The speaker demonstrated the principles upon which the jacket was applied, and referred in a general way to its superiority over other methods of fixation. Several additional points as to detail of application, were brought out in a general discussion which followed. His remarks were well received and becomingly appreciated.

SECTION ON MEDICINE.

Wednesday, July 30th—Second Day.

The Section was called to order by the President, Dr. J. W. T. Smith, of Belfast, who delivered an address.

The subject for discussion was

ALBUMINURIA, ITS CAUSES, CONSEQUENCES, DIAGNOSIS, AND TREATMENT,

which was opened by Dr. George Johnson, of London. He reviewed the subject in an exhaustive manner, noting all the more recent advances made in its study, particularly those referring to diagnosis and treatment.

In the discussion which followed, a letter was presented from Sir Andrew Clark, of London, calling attention to the importance of recognizing the non-functional forms of albuminuria. These he thought should be divided into four varieties, hepatic, oxaluric, gouty, and nervous.

ADDRESSES BEFORE THE SECTIONS.

The other addresses before the Sections this afternoon were respectively as follows: "Obstetric Medicine," by Dr. Clement Godson, of London; "Ophthalmology," by Dr. W. A. McKeon, of Belfast; "Physiology and Pathology," by Dr. W. S. Greenfield, of Edinburgh; "Pharmacology and Therapeutics," by Dr. Thomas J. Maclagan, of London.

In the evening a conversazione was given to the members of the Association in Queen's College by the President and Executive Committee. This was largely attended.

(To be continued.)

THE MEDICAL SOCIETY OF BERLIN.

Stated Meeting, June 25, 1884.

HERR SENATOR, PRESIDENT, IN THE CHAIR.

(Special Report for THE MEDICAL RECORD.)

THE Society having been called to order, HERR SCHÖLER exhibited a case of

MARKED RETRACTION OF THE CONJUNCTIVA.

The patient, a woman, sixty-nine years of age, had been in excellent health up to within about three years. Since 1881 she had had two attacks of pneumonia, and it was at one time feared that she was developing a pulmonary tuberculosis, but this danger was now past. In February of this year she had what appeared to be a simple catarrhal conjunctivitis, for the relief of which ordinary astringent lotions were employed. The swelling and redness did not subside, however, and in May the patient applied to Herr Schöler. He found the conjunctiva in both eyes evenly suffused, with here and there little specks of thickened secretion. There was, further, a very marked contraction of the fold where the conjunctiva is reflected from the ball of the eye to the lids. At that time the contraction of the superior fold was not so great but that the upper lid could be everted, but now it was as far advanced as at the inferior fold. Cicatrix-like bands could be seen, but there were no adhesions.

The patient gave no history of any former affection of the conjunctiva, and there was no disease of the eye itself. The cornea was perfectly normal. The speaker said that there were but two recognized conditions in which such an extensive retraction of the conjunctiva could occur. The first of these was granulation. But when this process has advanced far enough to cause such an atrophy of the conjunctiva, we always find corneal opacities. The second was pemphigus; but here, also, the cornea is always involved. But one similar case has been recorded, the account of which was published by Alfred Graefe's assistant in Halle. Graefe gave to the affection the name of essential retraction of the conjunctiva.

HERR KÖBNER then presented a patient suffering from

LICHEN RUBER PLANUS,

affecting not only the skin but also the mucous membrane of the mouth and tongue. The patient, a woman, sixty years of age, had had a hard chancre three years before, but had never exhibited any secondary symptoms. Two months ago the patient noticed a number of little pimples, looking like gnat-bites, on both hands. These itched and burned considerably, and soon spread to the extensor surfaces of the lower part of the forearms. At the same time it was stated that her tongue was coated. The eruption now was thickly spread over the extensor surfaces of both hands and forearms, with isolated nodules on the soles of the feet, the shoulders, and the palm of one hand. On both sides of the anterior portion of the back of the tongue was a row of dirty white, irregularly oval, roundish, or polygonal specks. There were a few very small nodules here and there, arranged in semicircular groups. On the inside of the right cheek there were numerous whitish specks, arranged in the form of a network, and some similar growths on the red border of the lower lip. The patient had taken about half an ounce of iodide of potassium without effect, but had appeared to improve somewhat since the administration of small doses of arsenic.

HERR VIRCHOW read a paper entitled

SYPHILITIC JOINT DISEASES.

He said his communication occupied nearly the same ground which was gone over by Herr Güterbock in his paper read at the meeting held on June 11th, but that he should not confine himself to the hereditary form. Syphilitic joint disease bore no slight resemblance to arthritis sicca, but in the syphilitic affection there was always an increase in the amount of the synovial fluid. The seat of the lesions is the same as it is in arthritis deformans. The principal changes take place in the cartilage, and consist in a gradual destruction of this tissue, sometimes advancing so far that the cartilage is entirely absent in certain portions. On the other hand, however, there is this difference between the two diseases, namely, that while in arthritis deformans the cartilage disappears and exposes the bone, in syphilitic arthritis the loss of substance in the cartilage is replaced by a coincident formation of connective tissue. In addition to this cicatrix-like development of connective tissue there is, in the worst cases, a villous growth, springing from the borders of these ulcers in the cartilage, and floating free in the fluid of the joint. One cannot help treating these lesions as though they were inflammatory, although they appear to be atrophic. The new growth of connective tissue at the bottom of the erosions in the cartilage recalls the cicatricial contractions of syphilitic lesions in other parts of the body. The author had never had the opportunity to examine a case in the early stage of this disease, but he thought it not improbable that there were in the beginning gummy processes at the points where the above-described lesions were found. In looking at the articular surfaces one would almost believe that pieces of the cartilage had sprung loose, so sharply defined are the edges of the ulcerations. They are found usually in the central parts of the joint and not, as in arthritis deformans, around the outer surface. Any of the joints may be thus affected, and undoubtedly the disease may in certain cases progress so far that the whole of the articular cartilage may be destroyed. The author exhibited a number of specimens showing the changes described, and related briefly the histories of the cases from which they had been taken. And he concluded from a study of these cases that there existed a

CHRONIC ARTICULAR CHONDRITIS

of a syphilitic nature. This disease resembled most closely arthritis deformans, yet differed from it in some important points. In the latter there is a new growth of cartilage tissue about the edges of the bones, but no such change takes place in the syphilitic affection. The disease runs its course without suppuration, in which it differs from the other form of syphilitic arthritis, sometimes met with in adults, which is accompanied by suppuration and carries off the osseous structure.

HERR A. BAGINSKY related a case of the hereditary syphilitic joint affection, described by Güterbock at a previous meeting of the Society, which he had observed in a child thirteen weeks old. In addition to the arthritis the child had also a skin eruption and pseudo-paralysis of the arm. This

PSEUDO-PARALYSIS

is not a very rare condition. The speaker met with two or three such cases on an average every year. At first sight there appears to be a true paralysis, for the affected limbs hang perfectly motionless; but a more careful examination reveals the fact that we have to do with a very different affection. Both the diaphyses and epiphyses of the bones are thickened, and any movements of the affected articulations cause severe pain. The joints are swollen, and suppuration sometimes takes place. Not infrequently the articular extremities of the bones are destroyed, and a wobbly joint remains.

There is still another form of joint disease in young children, in which there is nothing to indicate that it is of a syphilitic nature, and which the speaker thought was to be explained on the theory of a late appearing

PUERPERAL INFECTION.

The affection is seen in children three or four weeks old. There is first infiltration and swelling about the joint, later suppuration in the joint itself, and finally per-

foration. Particles of bone and cartilage may even be extended through the opening, and yet the subsequent progress of the disease is favorable. In one such case that he had observed there was perfect restoration of joint motion, so that the child, after it had begun to walk, had not the slightest limp. As regards the

TREATMENT OF SYPHILITIC JOINT DISEASES,

he had for years made use of corrosive-sublimate baths, to the exclusion of all other therapeutic measures. He used seven and a half grains of bichloride of mercury for each bath, and gave a bath every day or every other day. Twenty such baths suffice to bring about a substantial improvement, or even a complete cure, in some of the most severe forms of infantile syphilis. There is no necessity for giving calomel or any other remedy internally, thus saving the stomach from possible injury, a matter of no small importance for syphilitic children.

HERR HENOCH said that the director of the children's clinic in Naples had recently sent him his work on the joint diseases in hereditary syphilis, in which he found six cases of the affection described by Güterbock. It seemed to him, however, that there might be some doubt as to the syphilitic nature of all the cases there given. It was possible for other joint diseases to occur in syphilitic individuals. He could not understand how it was, if these affections were so common, that there was so little opportunity to observe them in Berlin. Of the immense number of children treated by him for hereditary syphilis, he had never yet seen one with syphilitic joint disease. It was true that he had had one patient who had at the same time arthritis of the elbow and syphilis; but while the other symptoms disappeared during a course of specific treatment, the joint disease steadily progressed. He therefore thought it fair to assume that the arthritis was non-specific in character.

HERR HIRSCHBERG asserted that he had often seen the joint affection of hereditary syphilis. At the same time with the characteristic deformity of the teeth, there was hydrarthrus of the knee. This was regarded, not only by the Germans but also by English authors, as a specific affection.

HERR HENOCH maintained that this malformation of the teeth was no indication of syphilis, for it was often observed in healthy children, and was as frequently absent in those who were undoubtedly syphilitic.

HERR HIRSCHBERG had convinced himself that Hutchinson's assertion on this point was correct. All syphilitic children might not have misshapen teeth, yet when the dental deformity existed, it was a certain indication of hereditary syphilis.

HERR G. LEWIN agreed with Herr Henoch. He thought the malformation of the teeth was due to nutritive disturbances rather than to syphilis. Referring to Herr Virchow's paper, he asked if the lesions there described were not the same as those occurring in caries sicca. He was inclined to believe that they were. The speaker then related some cases, occurring in his practice, of syphilitic arthritis in both adults and children.

HERR SCHÖLER held to the views advanced by Herr Hirschberg. He related an instance of joint disease in a child which had yielded readily to specific treatment.

HERR SONNENBURG was in accord with Herr Henoch in the opinion that syphilitic arthritis was a very rare affection. He had met with but two cases in his clinic in a number of years. He considered it exceedingly difficult to diagnose these affections, since there were no characteristic symptoms. He had seen a number of cases of joint disease in syphilitic children, but they resisted all specific treatment, and he had his doubts as to their syphilitic nature.

On motion it was resolved to postpone further discussion until the next meeting, and the Society then adjourned.

SUGAR-CURED is the epithet applied by *Puck* to the successful results of homœopathic medication.

THE HOSPITALS MEDICAL SOCIETY OF PARIS.

Stated Meeting, June 27, 1884.

M. BUCQUOY, PRESIDENT, IN THE CHAIR.

(Special Report for THE MEDICAL RECORD.)

THE Society having been called to order, the President announced the death of M. Moreau, of Tours, at the age of eighty-one years.

A somewhat heated discussion, participated in by a number of the members, then followed upon the question of establishing a

STANDING COMMITTEE ON EPIDEMICS.

It was finally decided to create such a committee, and the President appointed MM. Vallin, Bucquoy, Danlos, Du Castel, Labric, Laveran, and Tapret.

M. CADET DE GASSICOURT presented the third volume of his

TREATISE ON THE DISEASES OF CHILDREN.

He desired to call the attention of the members especially to the chapters on meningitis and diphtheria, two subjects to which he had devoted considerable study. He had been able, by the study of ten thousand cases seen by himself, to correct certain statements made by different authors concerning diphtheria.

M. TENNESON then exhibited a

PORTE-OUATE,

or cotton-holder, for making local applications to the cavity of the uterus. It consisted of a sound which could be bent in any desired curve, the end of which was provided with a little wad of cotton. The cotton could then be dipped in any medicinal substance and carried into the uterine cavity without necessitating a previous dilatation of the os.

By means of this instrument M. Tenneson had obtained good results in the

TREATMENT OF CHRONIC METRITIS.

The local treatment of this disease, he maintained, should not consist merely in the cauterization of that part of the uterus which could be reached through a speculum, for cervical metritis is a very rare condition. Intra-uterine injections may cause death, and the introduction of a suppository, to be left in the cavity of the uterus, is very apt to give rise to an excruciating colic. The speaker thought his method of making applications was superior to all others. He used an ointment of sulphate of copper (five to eight parts in thirty) or of white precipitate (two parts in thirty) in preference to tincture of iodine, nitric acid, or chloride of iron. There were two contra-indications to this mode of treatment of chronic metritis. The first of these was perimetritis. In the case of peri-uterine inflammation there was danger of exciting suppuration in cauterizing the mucous membrane. It was also necessary to omit the intra-uterine applications during the periods of acute exacerbation which occur so frequently in the course of chronic metritis. Emollients are called for during such attacks, and the caustic applications should not be resumed until the hypogastric tenderness has entirely disappeared, and the uterus is freely movable without pain.

M. MARTINEAU thought there was one fatal defect in M. Tenneson's instrument—a defect common to all similar appliances—and that was that the cotton on the end of the sound was not covered. In its passage through the internal os, the ointment would almost surely be rubbed off, and thus the attempt to cauterize the mucous membrane of the body of the uterus would miscarry. He had devised a porte-caustique, somewhat similar to Lallemant's instrument, by which the medicated cotton was retained within a canula until it was fairly within the internal os.

As regarded the treatment of metritis advanced by M. Tenneson, he thought it was very incomplete. He had seen four or five thousand cases of metritis in the past

six years, and he thought he knew something about the disease. The lymphatic spaces of the mucous membrane and parenchyma are the seat of inflammation. There are two lymphatic plexuses in the posterior part of the uterus, and it is there that the affection begins which is called perimetritis, or pelvic peritonitis, but which the speaker preferred to designate as

POSTERIOR ADENO-LYMPHANGITIS.

There is a deeply seated induration in this disease which no superficial applications can reach, but which can be removed only by stimulating the circulation in the part, and thus promoting the absorption of the exudation. Finally, it should be remembered that uterine inflammation is often dependent upon a diathesis, which latter is amenable to general treatment.

M. TENNESON preferred the term perimetritis as one not indicating a possibly erroneous pathological conception. He was prepared to admit, however, that the lymphatics played an important rôle in the production of the diseases, as M. Lucas-Championnière had pointed out. The speaker had not asserted that local treatment was sufficient, but had spoken of the general therapeutic management simply because that was not included in the scope of his communication. But he desired to protest against the idea of a diathesis. Diatheses were words, and nothing but words, used merely as a cloak for ignorance. He repudiated the term and the conception which was sought to be expressed by it.

M. MARTINEAU claimed that he was the first to demonstrate the part played by the lymphatics in perimetritis.

M. BUCQUOY thought the credit of priority was justly due M. Lucas-Championnière.

M. MARTINEAU admitted that others had spoken of lymphangitis in this connection, but he maintained that he had studied the subject more carefully than they.

M. DU CASTEL exhibited a specimen of

TUBERCULAR MENINGITIS

limited to the paracentral lobule. This was now the third case of this kind that he had seen, and he believed that this was the usual seat of localized tubercular meningitis in the adult.

M. BUCQUOY showed a patient who had suffered from an

HYDATID CYST AT THE BASE OF THE BRAIN.

He had related the history of this case at a former meeting of the Society, and some discussion had been aroused at the time. The patient was now perfectly well.

The Society, on motion, then adjourned.

A MEDICO-LEGAL NOTE.—A decision interesting to physicians, says the *Philadelphia Medical Times*, was recently rendered in the courts of one of the Western States. Two surgeons had been employed in a certain case, but in different ways and for different compensations. The patient did not seem satisfied with the treatment, and refused to pay either of the bills rendered. As a result, suit was shortly brought by one of the surgeons, and defended on the ground that the services were of no value. The court held, however, in favor of the surgeon, and judgment was given for him. This result was so unsatisfactory to the patient that he thereupon began a suit for malpractice, and one of the defences interposed was that this question had been, in effect, adjudicated in the previous suit and could not be again raised. This defence the court held to be a good one, deciding that the former suit was a bar to the second one. This decision is only one of several in the various States holding the same way, so that a physician or surgeon need not fear a direct suit for damages from malpractice if the value of his services have been acknowledged in a suit to recover the amount of his bill.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

MR. HUTCHINSON'S LECTURES AT THE LONDON HOSPITAL—EARLY SYMPTOMS OF CANCER—MEDICAL MEN AND THE TEMPERANCE CONGRESS—DR. RICHARDSON ON PAINLESS SLAUGHTERING—THE NORTH LONDON CONSUMPTION HOSPITAL—CHOLERA AND PRECAUTIONS AGAINST IT—THEORIES OF THE DISEASE—SMALL-POX.

LONDON, July 12, 1884.

As Emeritus Professor, Professor of Clinical Surgery Mr. Hutchinson is now delivering his second annual course of lectures at the London Hospital. This course was instituted last year on the occasion of Mr. Hutchinson's retirement from the acting surgical staff, when he was appointed consulting surgeon. It was considered desirable to retain him as a teacher in connection with the Medical College, so he was made Emeritus Professor, and undertook to deliver six lectures annually on some subject connected with surgery.

The lectures for the present year are perhaps a greater success than those given last summer, and being wholly delivered extempore appeal more directly to the minds of the auditors. It goes without saying that Mr. Hutchinson gives no mere summary of ordinary text-book opinions, but lays before his hearers, in plain and unmistakable terms, the results of his own clinical experience.

On Wednesday, July 2d, a good audience assembled to hear the lecture on "The Early Recognition of Cancer." The term "cancer" was used in its clinical sense and as including sarcoma, and not in its limited anatomical sense applying solely to carcinomatous growths. The importance of its early recognition was obvious. Mr. Hutchinson said that before the actual presence of cancer was what might be termed the pre-cancerous stage, and this was essentially a condition manifested by signs of local inflammation. An interesting case was narrated in support of this view. It was that of an old gentleman whom Mr. Hutchinson saw in consultation some years ago. One testicle had enlarged and was slowly increasing in size. The surgeons who saw the case agreed that it was probably not malignant and recommended non-interference. It continued to grow, however, and was at last removed solely by request of the patient, who had all along been anxious about it lest it should be cancerous. It was examined microscopically and was found to be simply in a condition of inflammatory hyperplasia, and no signs whatever of malignancy were discoverable. The patient recovered from the operation, no further trouble manifested itself, and his medical attendants came to the conclusion that his testicle had been really unnecessarily removed. Two years elapsed. The remaining testicle then began to enlarge in the same way in which the other had done. Remembering the result of the previous operation, the surgeons strongly advised the patient against operation. As before, it continued to enlarge until finally it reached a considerable size. At last even the surgeon began to be alarmed and the patient's anxiety was extreme. The testicle was finally removed at the urgent request of the patient. It was examined and proved to contain a well-marked sarcomatous growth. The inference was that the one first removed would, if allowed to remain, have also acquired a sarcomatous structure, and that the inflammatory hyperplasia found was a condition leading up to that of actual malignancy.

Eczema of the nipple preceding cancer was an illustration. Mr. Hutchinson remarked that cancer attacked parts that were functionally dead, as the breast in women late in life. Among animals it attacked the cat, the dog, and the horse, but not the sheep. The two former animals led a lazy life and were allowed to drag out their

existence to old age. Sheep were usually killed before they were old enough to develop cancer.

The practical conclusion Mr. Hutchinson drew from his view was to treat as cancer all those cases where you suspected it—to adopt active measures at once and not wait for more decided symptoms until it might be too late.

The recent Temperance Congress at Liverpool had what may be termed its medical side. Several medical men took part in it and read papers and delivered speeches. Dr. Ridge, of Enfield, made some rather startling statements, which may prove of importance should further research confirm them. Dr. Ridge said he had been able to show by experiment that alcohol was injurious to the health of growing cells in direct proportion to the quantity to which the cells were exposed, and that even a single drop of alcohol in a quart of water was able to affect them injuriously under suitable conditions. He now announced that he had found that alcohol, while we knew it to be an antiseptic in large quantities, was really a septic agent in very small ones, and that it promoted decomposition of animal and vegetable matter with bacterian effects. The accompaniments, if not the causes, of its decomposition flourished and were propagated to a greater extent when minute quantities of alcohol were present than when the decomposition was going on entirely in its absence. Below one per cent. the amount of alcohol present affected in proportion to its amount the degree of decomposition. Dr. Ridge deduced from these facts an argument against moderate drinking.

At the annual meeting of the Society for the Prevention of Cruelty to Animals on Monday, July 7th, Dr. Richardson gave an interesting account of the researches he had made to discover the best method of slaughtering animals without pain. He said that he had come to the conclusion that the electric shock could not safely be made use of by those who have to put animals to death. He had made experiments with various anæsthetics, and had chiefly employed carbonic oxide gas charged with the vapor of chloroform. Dr. Richardson has been able to make experiments on a large scale at the Dogs' Home, Battersea. Several hundred dogs have been painlessly put to death under anæsthesia, and sheep have been also killed in the same manner. Dr. Richardson suggests that the method should be employed in the killing of animals used as food. Painless slaughtering has been advocated by him for years, and now that an easy method is within reach we may hope for its adoption.

Another inquiry into hospital management is now taking place. This time it is the North London Consumption Hospital. This hospital is a most useful institution, and has had a good many good men on its staff. It is satisfactory to find that the errors of the past are likely to be redeemed in the future.

It is reported that a case of cholera is on board a ship now expected at the port of Cardiff. The authorities are quite prepared, and will not, of couse, allow any case to be landed. At every port the sanitary authorities are on the look-out. The various hospital authorities are bestirring themselves. In view of the fact that the stress of the last severe epidemic fell upon the East End, and that thus the London Hospital received within its walls a large number of cholera patients, a meeting of the staff of that hospital is to be held at once to consider what arrangements should be made in case of another epidemic.

Considering the probability of an invasion of cholera, it seems a pity it was not put down as a subject for discussion at the approaching International Congress. Even if no definite rules as to treatment had been agreed upon, we might have acquired some more distinct notion of its nature from hearing the views of investigators of various countries. The water-carriage theory is mainly held in England, but few of our clinical teachers have had the opportunity of practically studying the disease. In India, on the other hand, where most of our medical officers have had cholera cases to deal with, a large number of them decry the water theory altogether. The opinions held here are mainly the result of the teaching of the late Dr. Farr. He was an ardent advocate of the water theory, and all facts supporting it were pushed forward in the Reports of the Registrar-General, then edited by him. Opposed facts received at least scant courtesy, and many accused him of systematically suppressing them. The opinion of the Indian observers seems at least to merit a better hearing than it has yet obtained.

Small-pox is still increasing. Some of the hospitals have, in consequence of the prevalence of the disease in their neighborhoods, forbidden in-patients from receiving visitors as usual.

OUR PARIS LETTER.

(From our Special Correspondent.)

ANÆSTHESIA IN CHILDREN — GERMAIN ON THE GERM THEORY—HIS OPPOSITION TO THE SAYRE PLASTER-OF-PARIS JACKET—A STRANGE CIRCUMSTANCE CONNECTED WITH AN EPIDEMIC OF MEASLES AT BOURG ARGENTAL —A WORM IN THE EAR—CHOLERA AT TOULON.

PARIS, July 9, 1884.

In a work just brought out by Dr. de Saint-Germain, he resumes his clinical lectures of the last twelve years on different points of infantile surgery which came under his observation at the Children's Hospital in Paris, of which he is surgeon. In his first lecture the author treats of surgical anæsthesia, in which he shows that children possess no greater immunity against chloroform than adults, although the idea is entertained by some writers, the risk being the same in both cases. Nevertheless, M. de Saint-Germain never hesitates to employ chloroform in a great number of cases, even when it appears useless, as in keratitis. He prefers general to local anæsthesia, even when the latter would appear to be indicated, as, for instance, in opening abscesses, in operations for ingrowing of nails, etc., the local anæsthesia being as painful as the operation itself. Moreover, in the case of children one would have to fear the reaction after the application of cold. He employs chloroform alone; and in more than ten thousand cases in which he practised chloroformization he never had a single death. During the administration of chloroform M. de Saint-Germain attends exclusively to the respiratory rhythm and neglects the pulse, which, he says, gives indications too late to be of any value. The heart, it is known, dies the last.

M. de Saint-Germain often employs the Listerian method of dressing wounds, but without the least enthusiasm, and he expresses himself to the effect that the great lesson given by Lister to surgeons was to teach them how they were to wash their hands. He has no faith in the germ theory as far as the dressing of wounds is concerned, the ancient methods appearing to him sufficient in the great majority of cases.

According to M. de Saint-Germain, children do not enjoy immunity even against cancer. This is more frequent in boys than in girls, from the fact that cancer of the testicle is met with rather frequently, whereas cancer of the ovary is very rare. The forms most frequently observed in children were: the encephaloid and the fungus hæmatodes, then in the order of frequency the scirrhous form, epithelioma, and finally myosarcoma. The organ most frequently affected with cancer is the eye, and the encephaloid form is the most frequent. It is primarily intra-ocular and begins either in the choroid or in the retina. The treatment consists in the extirpation of the eye as soon as the diagnosis is established; it is the only chance in favor of the patient, and yet, unfortunately, relapses are not rare. I may here mention that Dr. de Saint-Germain is vehemently opposed to Dr. Sayre's system of treatment of spinal deformities, the plaster jackets as recommended by that surgeon being, he con-

siders, not only useless in these cases, but positively injurious, particularly in Pott's disease.

Dr. Paul Dagand has just published a report of a strange circumstance connected with an epidemic of measles which prevailed at Bourg Argental, in the department of the Loire, a short time ago. He detected the presence of a large quantity of round worms which had been expelled from the stomach and bowels, sometimes numbering as many as fifty. In one case a worm made its exit through the ear. A case occurred in a child aged seven years, who was affected with the measles. The child had been complaining of severe pain in the ear. On examination the physician noticed something which to him looked like the remains of a worm, in which he was not mistaken, as on trying to extract the object, to his surprise he found after its removal that it was a worm. The worm measured about twelve centimetres in length and two millimetres in diameter. The child had passed five or six of these helminths by the mouth a few days previously, which were slightly thicker than that which was removed from the ear. According to Dr. Dagand, the worm probably passed up through the Eustachian tube and perforated the tympanum. The child, who was seen again a fortnight after the occurrence, was quite well, with only a slight diminution of hearing of the right ear, which was the one affected. In getting the child to blow with its nose closed, no communication was perceptible between it and the ear. The otorrhœa which existed for a few days after the expulsion of the worm had disappeared. This case was brought to the notice of the Medical Society as a curiosity by Dr. Championnière, who remarked that though the case was very interesting, yet it was not without precedents. In the article "Lombric," in the "Dictionnaire des Sciences Medicales," Dr. Davaine reports that Winslow discovered a worm in the Eustachian tube of a little girl on whom he had a post-mortem examination. One extremity of the worm was in the pharynx, while the other was entangled among the bones of the tympanum. Bruneau, of Amboise, reports another case in which the subject was a young woman, from whose ear he removed an entire worm. He reports also that other observers had detected worms in other parts of the body. For instance, Rodriguez and Vrayet each relates a case of worms having been extracted from the inner angle of the eye. Apropos of these cases, Dr. Championnière observes that the migratory worms should not be confounded with the larvæ of insects which have sometimes been discovered under the eyelids, in the frontal sinuses, in the ear, and in the nostrils, and which might have been taken for entozoa.

The cholera at Toulon, which, as you are aware, broke out about three weeks ago, is still raging with varying intensity in that town, and although at first the local medical men were undecided as to the true nature of the epidemic, they are now agreed that the malady is indubitably of the Asiatic type. Dr. Rochard, Inspector-General of the Naval Department, and Drs. Brouardel and Proust, members of the Council of Hygiene, were deputed to report on the nature of the epidemic. These gentlemen gave it as their opinion that the disease, whether imported or not, is unmistakably the Asiatic cholera, though in a very attenuated form. Dr. Fauvel, however, the President of the Consultative Council under the Minister of Commerce, and who never went to Toulon since the outbreak, is singular in his opinion that the disease is of the sporadic type. This opinion he expressed officially, not only in his report, but before the Academy of Medicine at the outbreak of the epidemic, and to which he still adheres, on the grounds that it is not nearly so virulent or fatal as the Asiatic cholera. Moreover, it is more localized, has no tendency to spread, and was produced by purely local conditions, which are of the most anti-hygienic character that could be imagined. However, the epidemic has spread to Marseilles, but Dr. Fauvel thinks that it will go no further. May his prediction be realized. Meanwhile the whole country is in a state of panic, and the process of disinfection of men and things and other sanitary measures are being actively carried out.

RATTLESNAKE POISONING IN NEW YORK.

To the Editor of The Medical Record.

Sir: The somewhat unusual occurrence in New York City of a case of rattlesnake poisoning, and its unfortunate fatal termination having furnished a popular theme for the daily papers, it may not be uninteresting from a medical standpoint to recite the history of another metropolitan case which occurred just two years ago, the full history of which was never published. At that time it was impressed upon me that there had been no cases in New York City for eighteen years previously, the victim then being, as were also the two recent cases, a showman. The occurrence of two cases in two years is hardly sufficient to make us apprehend an epidemic of snake-bites in New York, or, on the other hand, are the cases frequent enough to destroy interest in them as novelties in metropolitan practice. The history of the case I have to report is as follows: E. W——, aged thirty-two, a showman, entered Ward 9, Bellevue Hospital, July 10, 1882. As the proprietor of a menagerie and museum then exhibiting in the Bowery it was his custom every evening to study the habits of a collection of a dozen rattlesnakes he had confined in a cage. Being careless in the handling of one of the larger ones, it struck at his hand, severely wounding his thumb in several places. The wounds were deep and the fangs had full opportunity to exert their influence. He immediately commenced to suck the wound, and sent for whiskey. Before it arrived evidences of constitutional infection were apparent. He complained of fulness in the head, vertigo, impairment of vision, and great prostration. He drank copiously of the whiskey and continued to suck the wound. On entering the hospital, the hand and arm presented to us, who had never before seen a snake-bite, a most peculiar appearance. They were greatly swollen, hard and tense and had a strange mottled discoloration extending to the shoulder. The color was a yellowish green, and figured in a manner best described by the term mottled. He was delirious, undoubtedly in part due to the whiskey, the tongue was dry and brown, and he suffered greatly from thirst. He was in marked shock, verging on collapse, and for twenty-four hours it was doubtful if he would survive, but to the vigorous treatment employed I think his recovery can undoubtedly be ascribed. Moderately free incisions enlarged the wounds, and to these free applications were made of strong aqua ammonia, and into the hand, forearm, and arm a solution of carbonate of ammonium was injected. This was given for both its local and its constitutional effect. Poultices of flaxseed and charcoal, enveloping the entire limb were applied and frequently changed. Diaphoretic and diuretic mixtures were given, together with the joint administration of carbonate of ammonium and phenic acid, then under trial in the hospital. Just how much resulted from the use of the latter cannot with accuracy be estimated, but to the ammonium the major part of the credit is given. After a very critical stage of twenty-four hours he began to improve, and, barring a tedious convalescence, did well.

Gangrene of the thumb supervened, rendering necessary amputation. The mottled look of the limb remained for some weeks.

Another example of novelties in city practice are tarantula-bites, of which I have had two cases, both occurring in men engaged in unloading bananas from West India fruiters. The symptoms were similar in character to snake-bites, but much less severe in degree.

Fraser C. Fuller, M.D.

224 West Fifty-ninth Street,
July 15, 1884.

"Small Fevers Thankfully Received" is a motto suggested to a young physician by Dr. Holmes.

THE USE OF PEPTONIZED MILK, AND HOW TO MAKE IT.

To the Editor of The Medical Record.

Sir: A formula for a food, as well as for a medicine, will certainly disappoint one who wishes to try it, and it may do much harm, if it be wrongly stated. In my note to you on peptonizing milk, the word grains has in three places been printed grams or grammes, thus making the quantities fifteen times too much. The sentence, "Mix a powder consisting of five grammes of Fairchild's extractum pancreatis," etc., should be, "Mix a powder consisting of five grains," etc. In the letter from Professor Leeds, "1¼ grams of extractum pancreatis and 4 grammes of sodium bicarbonate," should read, "1¼ grains of extractum pancreatis and 4 grains of sodium bicarbonate." In justice to Professor Leeds as well as myself, please publish these corrections.

Yours truly, J. Lewis Smith, M.D.

New York, July 21, 1884.

A PROBLEM, ETHICAL AND MEDICO-LEGAL.

To the Editor of The Medical Record.

Sir: An unmarried woman, about forty-five years o age, of spare frame and delicate nervous organization, is now suffering, as she has formerly done after various intervals in her life, with hysteria, accompanied by some emotional and mental aberration, and exhibiting a tendency under her present management to confirmed insanity. Without medical advice or direction, her family have locked this poor woman up in a small room, have put strong and gloomy looking oak bars across the windows, have left her much of the time alone in the room, without a bed, chair, carpet, or show of comfort, having only an angular and uncomfortable lounge to lie on, and have provided her with no regular attendant, medicines, or physician. She has been sleepless, almost without appetite, and having a pulse of feverish and excited character. It is doubtful whether she has been provided with suitable and sufficient food. She has been treated to a strait-jacket several times, and the amateur directors of her case have sought diligently among the physicians of the town to have her bled freely, but none would do the job. In none of these attacks has she ever appeared dangerous, her most offensive freak (except some harsh talk about her relatives) consisting of a break for liberty, at night, perhaps not too well clad, and this not recently, but at one or two former periods, before this present demon-baiting system was adopted. The friends of this poor woman think themselves intelligent, liberal-minded, even benevolent. They are financially able to procure comforts and help for their afflicted relative.

Now for the

Problem.—What is the social and ethical duty and legal power of remedy in the above case, possessed by a neighbor and physician who knows and can prove facts as stated? Can it legally be that such neglect of skilled advice and treatment, and such an active course of mediæval or barbarous management be adopted and pursued upon the mere whim and guidance of unmedical and relentless friends (?) of the invalid? Has the educated and humane onlooker no power to interfere in the defence of outraged personal rights and for the correction of abused nature and health of mind and body? An early answer will oblige Humanity.

——, Pennsylvania, July 19, 1884.

[The law of Pennsylvania is that insane persons may be placed in a hospital: "On statement in writing of any respectable person that a certain person is insane and requires restraint, the judge shall appoint at once a commission to inquire into and report upon the case. This commission shall be composed of three persons, of whom one at least shall be a physician and another a lawyer. If after hearing the evidence they think it a suitable case for confinement, the judge shall issue his warrant for such disposition of the insane person as the circumstances of the case require. If any insane person is manifestly suffering from want of proper care, any law judge shall order him to be placed in some hospital for the insane. In such cases, however, notices must be served and a hearing given."

There seems to be a sufficient remedy indicated in the above.—Ed.]

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from July 20 to July 26, 1884.

Wright, J. P., Major and Surgeon. Granted leave of absence for one month on surgeon's certificate of disability. S. O. 89, par. 3, Headquarters Department of Texas, July 17, 1884.

Hartsuff, Albert, Major and Surgeon. Leave of absence extended one month. S. O. 79, Headquarters Division of the Missouri, July 18, 1884.

Reed, Walter, Captain and Assistant Surgeon. Relieved from duty at Fort Sidney, Neb., and ordered for duty as Post Surgeon, Fort Robinson, Neb., relieving Assistant Surgeon Henry McElderry, U. S. A. S. O. 62, par. 2, Headquarters Department of Platte, July 22, 1884.

Benham, R. B., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Brown, Texas. S. O. 90, par. 1, Headquarters Department of Texas, July 19, 1884.

Strong, Norton, First Lieutenant and Assistant Surgeon. Granted leave of absence for two months, to take effect when relieved from duty in Department of the Platte. S. O. 68, par. 2, Headquarters Division of the Missouri, June 27, 1884.

Official List of Changes in the Medical Corps of the U. S. Navy, during the week ending July 19, 1884.

Gihon, A. L., Medical Director. Ordered as Member of Board of Inspection.

Persons, R. C., Passed Assistant Surgeon. Ordered to U. S. S. Saratoga.

Seigfried, C. A., Passed Assistant Surgeon. Detached from U. S. S. Saratoga; ordered to Naval Hospital, Brooklyn.

Savre, J. S., Assistant Surgeon. Ordered to U. S. S. Independence.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending July 19, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
July 19, 1884	3	15	50	3	167	27	1	0
July 12, 1884	2	8	55	4	187	31	0	0
Deaths.								
July 19, 1884	1	5	11	3	30	16	0	0
July 12, 1884	0	3	14	3	27	18	0	0

Tubercle Bacilli in the Non-tuberculous.—Dr. George Zahn records at length a case in which tubercle bacilli were found in the sputa, but in which after death no tuberculous process at all was found in the lungs.

Alum coagulates the albumen of the saliva and mucus of the mouth into membrane-like flakes. It causes contraction of the capillaries, blanching of the mucous membrane, and subsequent diminution of secretion. Notwithstanding its power to coagulate albumen it is absorbed into the blood, and Orfila found it in the liver and urine. Circulating in the blood it contracts the capillaries, prevents the emigration of leucocytes and red corpuscles, and arrests secretion and hemorrhage. May it not also arrest cell-growth, and may not this harmless and not unpleasant remedy be tried against sarcomas, and even cancers of internal organs which cannot be reached by the surgeon's knife?

Acetum Opii is made from opium, ʒ v. ; nutmeg, ʒ j. ; sugar, ʒ viij. ; dilute acetic acid, O ij. This is the strongest liquid preparation of opium, viz., 75 grs. to ʒ j. or 6½ minims to gr. j. It is nearly free from the sickening smell of opium, and less apt to nauseate. The nutmeg helps to prevent nausea and there is almost complete absence of narcotine, the most irritating ingredient of opium to the stomach ; in this acetate equals deodorized opium. Dose 5 to 10 minims. It may also be given in aromatic vinegar, to make it still more pleasant and efficacious.

Apomorphia was discovered in 1869, by Gee. It results from the action of hydrochloric acid on morphia, which extracts one molecule of water. Codeia and hydrochloric acid makes chlorocodia, which splits into chloride of methyl and apomorphia ; sulphate of morphia with excess of sulphuric acid makes sulph-morphia and sulphate of apomorphia. *Apomorphia* is soluble in water, ether, benzol, or chloroform. Two grains injected into a dog causes vomiting, and coursing around the room in a curiously persistent and methodical manner. Cats do the same, and also turn summersaults in the air. Two grains more caused epileptiform convulsions ; and two more perfect relaxation and death. On man, one-fifth grain caused in twenty minutes headache, dizziness, oppression, and qualmishness ; face pale, free salivation ; pulse infrequent, small and feeble, and free vomiting in ten to twenty minutes. It is a cerebral emetic. Sometimes there is retching, at others free vomiting without effort. It is chiefly used hypodermically in cases of great emergency when it is necessary to cause vomiting. The dose is one-fiftieth to one-tenth grain. It has been used in some disorders of coördination, in sick headaches, disorders of the cerebellum, and in the early stages of cerebral meningitis. It is a dangerous remedy, and comparatively rarely used, although the homœopathists advertise it widely as a remedy against sea-sickness.

Ammonii Phosphas.—Phosphate of ammonia is made from dilute phosphoric acid, ʒ xx. ; aqua ammon. fort., q. s. It has a cooling, sharply saline taste, is insoluble in alcohol, but soluble in four parts of cold water. Dose, ten to twenty grains three times a day in water, or barley-water. It is supposed to make more soluble salts with uric acid than those of soda and lime, and to be useful in gouty concretions, gout, and rheumatic gout. In uric acid gravel it is more than rivalled by borax, the utility of which is very great. It enters the urine from the kidneys almost unchanged, attacks the uric acid, which it decomposes, forming a soluble urate of sodium. Dose five to thirty grains.

Ammonii Boras, or borate of ammonium, is made from one part of boracic acid in three parts of warm ammonia water. It has a strong ammoniacal odor, and dissolves in twelve parts of cold water. It is used for urinary disorders with an excess of acid or earthy phosphates, and in irritability of the bladder. It has fallen into disuse, but is nearly as useful as borate of sodium. Dose ten to twenty grains largely diluted. It of course is one of the remedies for lithæmia, and has been used in low fevers in the place of the carbonate of ammonia, especially when there is ulceration of the bowels.

Sugar as Food.—The *Deutsch-Amerikanische Apotheker Zeitung* (December 1, 1883), gives a note by Dr. Phipson, on sugar as a regular article of diet. Dr. Phipson opposes the general prejudice against sugar. He declares that he has, during forty years, eaten very largely of it, at least a quarter of a pound daily, not counting sugar-forming substances taken at the same time. During all this time he has not been under the necessity of taking medicine, and has not suffered from any complaint, except brief attacks which could be traced to irregularities in eating or in dress. He declares that the condition of men would be much improved if the use of sugar should substitute that of alcohol.

An Anti-rachitic Mixture.—Dr. Von Leser recommended, in a paper read before the Leipzig Medical Society, the following mixture in the treatment of rachitis :

℞.	Tinct. rhei vinos.....	20 parts.
	Solut. potas. acetici	10 "
	Vini stibiati.....	5 "
M.		

The beginning dose is five to ten drops three times daily. This is increased three drops every three days until twenty to thirty drops is reached. The maximum dose is continued three or four weeks. Improvement sets in so rapidly that this is then rapidly decreased.

The Cause of Objective Quacking Sounds in the Ear.—Dr. William S. Parker, of Piqua, O., recounts the following case and asks for a diagnosis : "Miss D——, aged thirty, about the last of October, 1883, had a slight fainting spell, not amounting to unconsciousness, accompanied with nausea and thickness of speech, so much so that she was unable to articulate. This lasted but an hour and a half, and was the only attack she ever had. I may mention that for several years she has been subject to very slight attacks of vertigo, which, but for the present state of affairs, would pass unnoticed. Since the attack in October she had constant ringing in the ears until January 1, 1884, at which time she noticed that the sound became interrupted in a manner hereafter described. I observe that she is in perfect health in every particular, and never had any serious illness. The ears are perfect, as is also their function. Upon examination at this date (June 12, 1884), I find by placing my ear against that of the patient, a distinct sound, precisely like that of the quacking of a mallard duck in the far-off distance (which she says exactly describes the sound as it seems to her). This sound is synchronous with each beat of the heart, and is heard very distinctly in the left ear, and only slightly less so in the right by myself, although the patient can only perceive it in the left ear. Pressure upon the carotids makes no difference in the sound. Inflation of the Eustachian tube also has no effect. Lying upon the left ear intensifies the sound very largely, says 'it is like the roaring of a saw-mill.' This condition has obtained since January 1st last, when it was first observed."

Removal of Benign Mammary Tumors without Mutilation.—Dr. N. E. Oliver, of Thornton, Ill., sends us the following : "In your issue of July 5th (Vol. xxvi., No. 1), on page 12, is an excerpt from *The Archives Med. Belges*, in which M. Molière claims originality for the (therein described) operation for the removal of (benign) mammary tumors without mutilation. Professor T. Gaillard Thomas, in a communication (read before the New York Obstetrical Society, February 21, 1882) to *The New York Medical Journal and Obstetrical Review* for April, 1882, describes the above operation as applicable to all benign tumors of medium size. It would seem that American medical literature scarcely receives appropriate recognition from our irascible French brethren, otherwise so distinguished a gentleman would not be guilty of so palpable a 'medical plagiarism,' or at any rate he would not be two years behind the times."

Trichinosis in Massachusetts.—Dr. Averill, of Campello, Mass., sends us the notes of several cases of trichinosis recently occurring in his practice. He writes: "On March 27, 1884, I was asked to visit a Swedish family consisting of husband, wife, and four children. I found husband and wife and eldest child (a son about eight eight years of age) all sick in bed, and learned that they all took to their beds about the same time some three or four days before calling for me. All had felt tired and languid for several days before taking to the bed. All were œdematous about the face and eyes, and the wife was markedly so all over her body. They complained of pains all through their bodies, headache, lassitude, muscles were sore and painful when touched or moved, limbs generally flexed, and extension caused extreme pain. The husband complained especially of pains across his thorax. Temperature about 102½°, pulse about 125." Dr. Averill learned that about a week before the sickness the family bought half a smoked ham, and all had been eating it raw except the three younger children, who were not attacked. Another family in the same house bought the other half of the ham. The husband alone ate some of it raw, and he alone was taken sick, but recovered. The three sick members of the first family gradually recovered, but it was about five weeks before the symptoms had disappeared.

The Lack of Progress of Cremation.—With reference to our recent editorial upon this subject, Dr. F. Hoffmann, editor of the *Pharmaceutische Rundschau*, calls our attention to an article by himself in the March number of that journal. He there shows by statistics the very slight progress that cremation as a mode of burial is making, and takes the ground that it is an uncalled-for and dangerous mortuary rite.

The Psycho-pathology of an Application for Increase of Pension.—A pension surgeon at Washington sends us the copy of a very ingenious medical certificate which was sent to his office a few days ago with an application for an increase of pension. "Affiants discover upon the right instep of the applicant a soft and movable cicatrix, as if the integuments had been ploughed up by a bullet. We find no deformity or displacement of the tarsal or metatarsal bones, and no erythema or hyperæsthesia of the surface of the wounded region. Affiants also discover that the applicant's disability is greatly increased at times by the reaction of the above described cicatrix on the higher nervous centres. We believe that a sensory impression, conveyed from the cicatrix through the second pair of cranial nerves, is intensified in the cerebrum by certain processes of intellection, one of which is known as expectant attention. The impression so intensified and modified is then reflected to the region where the trauma was sustained, and the applicant's sufferings are increased many fold. Under such circumstances, and at the time when these reflex nervous phenomena are manifested, we believe that the applicant's disability is extreme, and that an increase is urgently indicated as a therapeutic measure. ——, M.D., ——, M.D."

The Therapeutic Value of the Iron Albuminate in Anæmia.—Dr. Allan McLane Hamilton writes: "I have been in the habit for several years past of giving iron in combination with albumen to nervous patients whose powers of assimilation were so enfeebled that they were unable to take any of the preparations in ordinary use, even the most bland and non-irritating. Anæmic and hysterical women and those with idiosyncrasies often declare their unwillingness or inability to continue the iron, even in minute doses, and in such patients something must be found to take its place. In the year 1871 Diehl announced the discovery of the albuminate of iron, but so far as I can discover, no one has yet employed the combination in medicine. Miahle has held that 'the albuminate of the peroxide of iron is formed in the blood and that this is the basis of the red globules,' and it has been shown that the presence of an alkali favors the catalytic change. Some iron salts are absolutely inert as remedies and pass unaltered from the body. Among these are the ferro and ferricyanides of potassium and other double salts which are not precipitated by the alkalies (Headland). The combination of iron and albumen with an alkali seems to be at once a measure likely to be of value from a therapeutic point of view, and so I have found it. Mr. Theodore Angelo, of New York, has made for me a dry preparation of the iron albuminate, and he has combined with this chocolate and moulded this into small lozenges, each of which contains ten grains of the salt. I have given the iron albuminate a thorough trial in a large number of cases of all kinds where a hæmatic was needed, and am convinced that there is no form of iron now in use that acts as rapidly or is so well borne by the stomach as that of which I write."

A Question of Maternal Impression.—Dr. C. H. French, of Waterbury, Conn., writes: "I was engaged to attend Mrs. T—— during her confinement. Soon after conception a young man, whose right arm just above the elbow had been amputated some years ago, came to board in the family. Mrs. T—— felt very sorry for the young man, showing her sympathy by frequently washing and dressing the arm. She says that that young man's arm was seldom out of her mind, and that any person she saw who was similarly affected (she had seen several) sent a thrill of horror, followed by one of intense sympathy, through her. I delivered her, on June 5th, of twins. One of the children had the right arm just below the elbow missing. Whether this was merely a coincidence or the result of the mother's mind over the fœtal development I am not prepared to state. In view of the fact that cases of this nature, taken collectively, may be of value, I send you this."

Some Delusions in Medical Chemistry.—That colorless tincture of iodine has the chemical and medical properties of the tincture of iodine. That serum albumen is the only albuminous body to be tested for in the urine. That potassium chlorate yields oxygen to the blood (some recent experiments have made this not so improbable). That corrosive sublimate or potassium permanganate can be given with vegetable preparations.

Identity of Friedlander's Pneumonia Cocci with the Organisms of Salivary Septicæmia.—Dr. George M. Sternberg, U. S. A., sends us the following important communication: "I am induced by your remarks upon 'Micrococci under the Floor' (The Medical Record, June 28), to call your attention to the apparent morphological identity of Friedländer's micrococci of pneumonia and the micrococci from the blood of a rabbit inoculated with human saliva, shown in Fig. 1 of the plate which illustrates my paper on 'A Fatal Form of Septicæmia in the Rabbit,' etc. (published in 1881), a copy of which I send you by mail to-day. This morphological identity was recognized at once by Dr. Wm. Welch, of New York, when I called his attention to this figure, upon his visiting the biological laboratory at Johns Hopkins University not long since. As Dr. Welch has personally demonstrated the presence of Friedländer's (?) micrococcus in pneumonic sputum, his recognition of this morphological identity at once confirmed my own suspicions. I have not myself had an opportunity to examine pneumonic sputum since the announcement of Friedländer's discovery (?)."

Urinary Test Papers.—Messrs. Parke Davis & Co., of Detroit, have manufactured a very neat and convenient pocket case containing the various test papers for urinary analysis recommended by Dr. G. Oliver, of Harrowgate, Eng. (*Lancet*, February 3, 1884), and Dr. C. W. Purdy, of Chicago (*Jour. Amer. Med. Assoc.*, January 19, 1884). It is also supplied with test tubes, and dropper making the whole a very useful pocket companion for the general practitioner.

The Medical Record

A Weekly Journal of Medicine and Surgery

Vol. 26, No. 6 NEW YORK, AUGUST 9, 1884 Whole No. 718

Original Articles.

PUERPERAL FEVER,

BEING AN ADDRESS ON OBSTETRIC MEDICINE,

Delivered at the Fifty-second Annual Meeting of the British Medical Association, held in Belfast, 1884.

BY GEORGE H. KIDD, M.D. ED.; M.A.O., HON. CAUSA, DUBL.

FELLOW AND EX-PRESIDENT ROYAL COLLEGE OF SURGEONS, IRELAND; HONORARY FELLOW LONDON AND EDINBURGH OBSTETRICAL SOCIETIES; CORRESPONDING MEMBER OF THE GYNECOLOGICAL SOCIETIES OF BERLIN AND BOSTON; CONSULTANT AND EX-MASTER OF THE COOMBE LYING-IN HOSPITAL; CONSULTING OBSTETRIC SURGEON TO THE HOSPITALS OF THE HOUSE OF INDUSTRY; PRESIDENT OF THE OBSTETRIC SECTION OF THE IRISH ACADEMY OF MEDICINE.

(Special for THE MEDICAL RECORD.)

MEETINGS such as those of the great Association under whose auspices we are here assembled have always appeared to me as having their most useful function in presenting opportunities for reviewing the work we have been doing; estimating the value of the results attained; eliminating, so far as may be, the erroneous or defective; and so getting plainly before us certain standpoints from which further advances may be made. I propose, then, in endeavoring to accomplish the duty imposed on me by your Council when they selected me for the high and honorable office of delivering an address on obstetric medicine, to take Puerperal Fever as my subject, and to treat it in accordance with these principles. In selecting this subject I have been influenced not only by its importance—its vital importance—to one and all of us, but also by the great advances that have recently been made in our knowledge of its pathology, and in some measure perhaps by the feeling that in our enthusiastic pursuit of the new paths that have been opened to us we are in danger of losing the clue that is to lead us out of the labyrinth in which we have so long been wandering. I shall ask you to consider the disease mainly from a clinical point of view, referring to the laboratory experiments of scientists and pathologists to illustrate and explain the facts observed at the bedside, where alone disease can be studied. In doing this I shall not attempt to present any new or original doctrines. My task must be the more humble one of stating, with what clearness I may, the questions at issue, and the facts on which their solution must be founded, endeavoring to arrange and balance the evidence, so that its true value may be more fully apprehended.

Much of the difficulty that has always attended the study of this disease arises from the similarity of the symptoms during life and of the pathological appearances found after death in its various forms. Its dependence on the great act of childbirth, and the peculiar condition of the patient's system at this period, sufficiently account for this similarity. The enlarged and highly organized uterus suddenly emptied of its contents after violent muscular exertion, and becoming a mass of effete material, whose constituent elements have to be absorbed into the blood as a preliminary to their being eliminated from the system; the exposed state of its vessels; the torn and contused tissues; the great current of blood diverted from the course it has so long been pursuing; the altered condition of the fluid itself, and the highly strained nerve-tension—all tend to concentrate the diseased action of one set of organs, and to impress on it this similarity of development. The attempts, consequently, that have from the earliest times been made to differentiate the various forms of the disease, founded on its morbid anatomy and its symptoms, have failed to simplify its study or in any great degree elucidate its nature. A classification founded on the conditions under which the disease arises, and the nature of the exciting cause adopted by some writers, as by Barnes in modern times, has proved more useful and done more to promote accuracy. One founded on this principle will probably best serve the requirements of the present occasion.

A writer of the last century, Kirkland, upbraids his contemporaries with including "a thousand disorders" under the one head of puerperal fever. It requires but a very elementary knowledge of the subject to see that a large proportion of these disorders arise from traumatic causes. These, then, will constitute the first group I will ask you to consider, and perhaps not the least important, seeing that so much can be done for their prevention.

In tedious and difficult labors, more especially in first labors, the soft parts of the mother are liable to be injured at every stage—the cervix may be lacerated, the lips may be caught between the head of the child and the side of the pelvis and contused, the vaginal walls may be compressed till sloughing be induced, so as to lay open the bladder or the rectum, or both; the perineum may be torn, or some of the blood-vessels may be lacerated, and blood be effused into all the surrounding tissues, giving rise to hematoceles, more or less extensive; and yet, formidable as the enumeration seems, we all know that in the great majority of cases the reaction is moderate, the inflammation set up is localized, if the damage done be not excessive it is repaired, and the patient recovers. But if the patient be in an unhealthy condition, or if her surroundings be unwholesome, then a new train of symptoms may arise, not necessarily depending on the extent or gravity of the wounds, but influenced by them. The inflammation, instead of being normal in character, becomes abnormal; it may extend to surrounding parts, and peritonitis or pelvic cellulitis may be set up; or more distant parts may be affected, and the disease will manifest itself in the pleura or the serous membranes of the heart or of the joints; or the blood in the veins may be coagulated, giving rise to thrombi and emboli, and subsequently pyæmia.

We have now to inquire what is the nature of this change. The researches of modern pathologists and scientists have proved that it is due to the introduction of a poison into the system, and that certain vegetable organisms (bacteria) are essential agents in the production and dissemination of this poison. They are not agreed, however, as to the exact part played by these organisms. Some hold that the most severe injuries may be inflicted without producing inflammation, and that when inflammation takes its origin from a wound, all that the wound does is to play the part of the door of entrance for the real *noxa*—water germ, air germ, or germ which sticks to the surface of the weapon or missile which inflicts the injury. They assert that in the genesis of every inflammation, however definite may be the relation between the antecedent damage and consequent reaction, this relation is after all merely secondary. The true cause is the introduction into the damaged tissue from

the atmosphere of invisible germs. Where there are no germs, there is no possibility of inflammation. Others, as Dr. J. Burdon-Sanderson, to whom we are indebted for most of our exact knowledge on the subject, teach that inflammation is the direct physiological effect of injury, and that the only inflammations to which minute organisms stand in relation are those which from their proved dependence on previously existing inflammation may properly be termed secondary or infective, and that consequently the organisms in question were in all probability not so much mischief-makers as mischief-spreaders —that is to say, although an inflammation may come into existence without their aid, their presence communicates to it, after it has come into existence, the power of reproducing itself in previously healthy tissues, whether by extension or dissemination. During the ten years which have elapsed since 1872 (when he first taught this), Dr. Sanderson says the question of the intervention of micrococci, which was then strange even to professed pathologists, has become familiar to everyone, and now the tendency exists to believe that germs explain everything; so that whereas formerly one had to vindicate the very existence of such things as parts of pathological processes, it has now become a part of one's business to protest with all needful vehemence against the attribution to them of functions they do not possess.[1]

In support of his theory he proves a series of propositions on an experimental basis that seem to leave no room for rational doubt. He shows that the introduction into the circulating blood of a relatively large quantity of exudation, which is the most important effect of a considerable local inflammation, does not produce secondary inflammation elsewhere, and is not attended with any serious constitutional disturbance. He further shows that no organisms endowed with inflammation-producing phlogogenic particles exist in the atmosphere or in the ordinary aqueous liquids with which our bodies come into contact.

It had been proved by Hiller that bacteria collected from fluids in an advanced state of putrefaction might, when washed and purified, be introduced into the circulating blood without producing any injurious effect, though proved to be as lively and capable of development as ever. Hiller[2] even inoculated himself with them. Dr. Wegner[3] showed that the subcutaneous tissue of a rabbit may be kept distended for days by frequently renewed injections of unpurified air without producing inflammation, and that the effect was not more serious if the same tissue were ventilated for a number of hours by a continuous current of air, even when that air was derived from a post-mortem theatre. When water charged with septic bacteria was injected into the peritoneum of a rabbit, in quantity less than two ounces, it produced no effect whatever. When the animal was killed, the fluid had been absorbed and the lymphatics of the diaphragm were full of bacteria, but neither in them nor in the peritoneum were there any signs of inflammation. Similarly it was found, that when a current of the fluid was passed through the peritoneum for many hours, so that the membrane was exposed for a long time to whatever phlogogenic influences the liquid conveyed, no effect whatever was produced. These experiments with watery liquids are even more conclusive than those with air, for we have here to deal with media, in every particle of which we can very readily prove the actual existence of germs in such a state of viability as to only require a suitable soil to insure their development.

Having thus proved that the exudation of a normal inflammation is not infective, and that no organisms endowed with inflammation-producing phlogogenic particles exist in the atmosphere or in the ordinary aqueous liquids with which our bodies come into contact, Dr. Sanderson proceeds to show that whenever an inflammation becomes infective it owes that property to a chemical change in the exudation liquid, of which the presence of microzymes is a necessary condition, and that conversely septic organisms, which are infectious, owe their infectiveness to the exudation soil in which they have grown. He refers to experiments he made a dozen years ago, which showed that in rodent animals peritonitis induced by the injection of irritant liquids is always infective, notwithstanding that the irritant (tincture of iodine) was not only free from germs, but destructive of them. This was, he says, understood to mean that the first effect of the iodine was the effusion of liquid into the peritoneal cavity; the second the infection of this liquid by formed ferments which found their way into it, not from the atmosphere or from external media of any kind, but from the alimentary canal. In another experiment, water which had been boiled so as to remove all germs that might have been in it, was, when cool, injected, with antiseptic precautions, in so large a quantity that it could not be rapidly absorbed. When thus accumulated in the serous cavity it charged itself by diffusion, first with the salts, subsequently in increasing proportion with the proteids of the blood, and thus became a most favorable soil for the development of septic organisms, which in their turn acted infectively or phlogogenically on the blood-vessels and living tissues with which they came in contact. A septic peritonitis ensued, which killed the animal by septicæmia in twenty-four or thirty-six hours. It is thus shown that though the seed is indispensable to the coming into existence of the infective process, the question whether that seed becomes morbific or not depends not on the seed itself, but on the soil. Other experiments prove the same thing, and the whole result is to establish that the presence of septic organisms (provided that they have not been bred inside the organism) is not necessarily attended with any danger, but that they become sources of danger at once when they are brought into relation either with devitalized organs or with extravasated serous fluids of any kind, and particularly with inflammatory exudation.

The sum of our knowledge of these organisms seems to be this: They are found everywhere—in the air, in water, in the soil; in the bodies of the most healthy animals, on the surface where most exposed to the air; in the entrances to the alimentary and air passages; in the stomach and upper portions of the alimentary canal, but not frequently here, for acid secretions kill them; in the lower portions of the canal frequently; possibly also in the tissues of solid organs, as in the pancreas, liver, kidney, muscle, but this is still a disputed question. In the circulating blood of healthy animals they are never found. They enter the system by the absorbents of the mucous membrane of the small intestines, the lacteals, by the pulmonary mucous membrane, by recent wounds, by the uterine surface after delivery. They exist in the animal body without interfering with health. If they meet with a proper soil, such as exudation liquid, or dead tissue, they set up putrefaction, and in the process of putrefaction a poison is produced which, mingling with the blood, poisons it and gives rise to septicæmia. This poison they carry into the system, but the bacteria themselves are not poisonous.

Thus, then, we must have two factors for the production of the poison—(1) The material capable of putrefaction; and (2) bacteria to effect putrefaction.

Now, how are we to apply this to our subject? It is well known, as Billroth remarks, that in most open wounds, especially in contused wounds, shreds of connective tissue die, and in many spontaneous inflammations the circulation ceases in some parts of the inflamed tissues and they die. Here, then, we have the material from which the poison is to be elaborated, and the inference is plain that the first step to be taken to avoid this form of puerperal fever is to so conduct the labor as to

[1] Lumleian Lectures on Inflammation. Delivered before the Royal College of Physicians. By J. Burdon-Sanderson, M.D., etc. Brit. Med. Journal, April 8, 1882, p. 593.
[2] Brit. Med. Jour., January 5, 1878, p. 2. [3] Ibid., April 15, 1882, p. 527.

lessen the amount of injury done, to be careful that the membranes be not ruptured too soon, and that the head be not allowed to press so long on the soft parts as to injure them, and above all that no violence be used.

In the second place, to cut off so far as possible the access of bacteria to the injured parts, by cleanliness, by ventilation, by disinfection; but the experiments of Chauveau and of Kocher, of Berne and of Sanderson, prove that even where all access of organisms from without is cut off they will pass from the intestinal canal or other sources to the point where dead or dying tissue exists, and there set up putrefaction and the elaboration of the septic poison, and consequently a third indication remains of equal, if not greater, importance than the others—that is, to remove the products of decomposition as quickly as possible. Cleanliness, the adage says, is next to godliness. Mr. Simon has modified this, and tells us that of all our present removable causes of disease uncleanliness is the most deadly; and Burdon-Sanderson tells us that the only scientific definition of filth is that it consists of the products of bacterial evolution. If the septic poison be not introduced too quickly, too frequently, or in too large a quantity, the living blood and tissues will decompose and neutralize it. They are the best colytics. All collections of blood and liquids must be prevented. Liston did this by leaving the wounds after his operations exposed to the air for five or six hours, or covered with lint dipped in water till all oozing had ceased and the surfaces were glazed over, and then brought them into apposition. This was before the days of antiseptic surgery, yet the wounds were not poisoned by atmospheric germs. Lister leaves drainage-tubes in the wound to carry off the fluids as formed. In obstetric practice we must depend on the natural drainage and on frequent washings by the syringe. Billroth says that in ordinary wounds the secretion poured out within the first forty-eight hours is especially active, and that the stinking products of tissue decomposition are possibly the least noxious. This does not seem to me to hold good of the discharges after delivery, but let it be so or not we must ever bear in mind that uncleanliness must be reckoned as the deadliest of our present removable causes of disease.

The next group we have to consider is so closely connected with the former that it will not be necessary to dwell on it at any length. Since the days of Hippocrates it has been known that portions of the placenta, or membranes, or clots, retained within the uterus will cause fever. As in the laboratory, infusions made of fragments of organic matter, animal or vegetable, afford the material on which bacteria may work and elaborate septic poison, so will organic substances retained in the uterus afford the conditions for the formation of septic poison, which, when it gets into the system, will set up fever. Harvey, of whom it has been said that if he had not been a great physiologist, he would have been a great obstetrician, washed out the uterus under these circumstances; but it is to Dr. Braxton Hicks we are indebted for formally recommending the practice. The rapidity with which the fever subsides when this is sufficiently done proves that the fever depends on the absorption of the poison.

Closely connected with these groups is another set of cases where the disease takes its origin in varicose veins, which inflame, and in which thrombi form, giving rise to emboli and pyæmia with metastatic abscesses. Bacteria make their way into these thrombi, from within the system, and cause them to disintegrate and break into fragments, which, being carried off in the current of the blood, get arrested at certain points and give rise to secondary inflammations and metastatic abscesses.

The foregoing groups belong to the class Dr. Barnes calls autogenetic. Autogenetic they are so far as the primary factor for their production is concerned, but for their development they require the presence of organisms to carry on the manufacture of the posion—that is, the active agent in their production. The cases we have next to consider present a different clinical history, and seem to depend on entirely different causes. Those we have been considering occur only after labor, and have their origin in conditions caused by labor. They occur in isolated cases, are not infectious, and do not spread through whole communities. In the cases we have now to consider the disease may manifest itself before labor has set in. It seizes great numbers at the same time; it observes cycles of development and decline, sometimes disappearing altogether for long or short periods; at its onset it proves fatal to almost all who are attacked by it, as it declines it becomes more mild in its character, and many of those attacked recover. In all these respects these cases resemble diseases specific in their nature, and dependent for their development on the action of a specific epidemic influence.

The occurrence of fever before labor, which rapidly develops after delivery into puerperal fever of a very fatal character, has been noted and described by many observers. In the following cases all the facts seem to be so fully verified as to leave no room for doubt: A lady, mother of several children, residing in a healthy situation, in a large and well-kept house, when expecting her confinement, had one of her children under the care of Mr. Wheeler for club-foot. Not feeling very well she spoke to Mr. Wheeler about herself, and he prescribed a diaphoretic mixture. Next day Mr. Wheeler finding the fever increasing, and knowing that she was in hourly expectation of her confinement, advised her to send for her accoucheur. Dr. William Smyly now saw her, on April 14, 1882. He found her skin dry and hot; her pulse, 120; her temperature, 104° F. The fever continued to increase till the morning of the 15th, when perspiration occurred, and labor set in. The child was born at 1.30 P.M. on the 15th—a healthy child, still living. The fever continued; though the temperature never again reached 103°, the pulse was abnormally and increasingly fast. The lochial discharge became fetid and the abdomen tympanitic. During the night of the 18th violent diarrhœa set in, with great pain. I saw her the following morning; she had then a very rapid and small pulse, the abdomen was tympanitic, the breasts flaccid, the skin relaxed, and she was gulping up mouthfuls of coffee-ground fluid, and was apparently dying, but rallied a little, and lived till the next day—the sixth after her confinement. There was no history of exposure to any zymotic disease. Her infant was born alive and healthy, and continued healthy. There was no disease in the house or family. The child under treatment for club-foot was wearing a boot, and running about in perfect health. The fever manifested itself before either accoucheur or nurse was in attendance or labor had set in, and ran its fatal course with all the characters of puerperal fever.

Epidemics of puerperal fever have been so frequently snd so fully described that it is almost unnecessary to more than refer to them. But there is one epidemic on record whose whole history can be so clearly traced that it is exceptionally worthy of attention. It occurred in Rotunda Lying-in Hospital in 1854 and 1855, and has been described by the late Dr. McClintock[1] with all the faithfulness, accuracy, and vividness of detail characteristic of him. Unfortunately time will not admit of my giving more than a brief outline of the history. It was the second epidemic Dr. McClintock had witnessed in the hospital—the first being in 1845, when he was assistant under Dr. Charles Johnson, and this one in 1854–55 when he was himself Master.

The epidemic unequivocally declared itself in the first week of December, 1854, but not unexpectedly, Dr. McClintock says, for there had been twelve or fourteen cases of puerperal peritonitis and phlebitis, together with a few isolated cases of scarlatina and typhus, in the house during the preceding nine months.

[1] Proceedings of Dublin Obstetrical Society, Dublin Quarterly Journal of Medical Science, vol. xix., p. 456.

From the beginning of December to the 14th of February, 182 women were confined—not half the average, as admissions, except in extreme cases, were stopped in the end of December, and all January.

Of the 182, 38 or 1 in 5 were unequivocally affected, and of the 38, 17 recovered and 21 died—making the proportion of fatalities 1 in 8 of all admitted, more than tenfold the average of the hospital. In three of these cases the puerperal disease was complicated with scarlatina; of these two died. One woman, who was slowly recovering from scarlatina, which came on soon after delivery, was seized with symptoms of peritonitis on the tenth day, under which she rapidly sank.

"It rarely happens," Dr. McClintock says, "that puerperal fever breaks out in the hospital without its contemporary appearance in private practice; and it never happens, I believe, that it prevails to any extent outside the hospital without appearing among the patients within its walls. On the late occasion I had reason to know that several deaths had occurred from the disease among women confined at their own homes, and lacking neither comfort nor attention, before it visited the hospital. Nor since then were its ravages confined to the poor inmates of our wards, for many women among even the upper classes of society were carried off under its fatal influence. During the months of December and January no less then twelve of such deaths, in and about Dublin, came to my own knowledge, and I have heard of four or five more in the beginning of last month" (February, 1855).

On the outset of the fever in the hospital it displayed uncommon virulence, and the first seven patients who were attacked fell victims to its malignity.

The progress of the epidemic is shown by the number attacked on different successive days. Thus, on each of the following days—viz., the 1st, 3d, 4th, 6th, 9th, 10th, 11th, and 12th December, there was one woman seized with the disorder, three on the 13th, and three on the 15th, and on no subsequent days of this month was there more than one, and on many days not one was attacked; but in February two were attacked on the 8th, two on the 9th, and two on the 10th.

With respect to the period after delivery at which the patient was seized the following are the general results:—2 were attacked in three hours from the completion of labor, 1 in four hours, 1 in twelve, 1 in fourteen, 1 in seventeen, and 1 in twenty-two hours. Each of these seven cases terminated fatally. One was seized in twenty-two hours after delivery, and 1 in twenty-three—the former recovered, and the latter died. Thus we see, of 9 patients in whom the complaint manifested itself on the first day of childbed 8 died; 12 were affected on the second day, 6 of whom died; 10 were attacked on the third day, and of this number the complaint proved fatal to three.

Here, then, is a disease which approaches gradually, which suddenly acquires such force as to make the mortality of a hospital nearly tenfold, which at its onset caused the death of all who were attacked by it, which affected the city at large, which manifested itself sometimes within three hours of the patient's delivery, and which gradually exhausted its violence and ceased. Is not this the history of an epidemic? Does it not remind one of the history of cholera, or of small-pox, epidemics of which are also characterized by their gradual approach, marked by sporadic cases, their furious onslaught and their gradual subsidence indicated by diminished violence and the increased number of recoveries?

Epidemic diseases vary as to the mode of their commencement. Generally their advent is heralded by the occurrence of isolated cases at varying intervals. It was thus in the epidemic of 1854–5, of which we have been speaking, and in that of 1826, described by Dr. Collins. In the epidemic of 1845, also described by Dr. M'Clintock, there were no indications of its approach. Its invasion was sudden and unexpected. It sometimes disappears abruptly, as in that described by Dr. Collins: "In the year preceding my appointment as Master," he says, "which took place in November, 1826, puerperal fever prevailed in the hospital to an alarming extent. In the succeeding year, 1827, the mortality from this disease was slight. Typhus fever was, during these periods, very prevalent in Dublin, and many cases of it appeared in hospital. In 1828 the attack of puerperal fever was much more severe, proving fatal to twenty-one women. It continued to increase in violence considerably in the months of January, February, and March, after which it disappeared, and for the four remaining years of my Mastership we did not lose a single patient from this disease."

During these four years 10,785 patients were delivered in the hospital, of whom only 58 died, which is nearly in the proportion of 1 in 186, or 0.54 per cent.—the lowest mortality on record—in an equal number of a similar class of patients, as Dr. Collins, writing in 1836, remarks, and now, in 1884, the same remark, I believe, holds good. The mortality of lying-in hospitals may be taken as depending on the extent to which puerperal fever prevails. For short periods, when fever is absent, the average is low, but when the observation extends over a longer term the average is equalized.

The whole mortality of the Rotunda Hospital, from its opening in 1757 to the close of Dr. Shekleton's Mastership in 1854, nearly one hundred years, was at the rate of 1.21 per cent. As we have just seen, during the four years after the epidemic of 1826 it fell to 0.54, but during the whole seven years of Dr. Collins' Mastership it was 0.96. During the seven years of Dr. Evory's Mastership, 1794–1800, it was lower, 0.75. From 1781 to 1786 under Dr. Rock, it was 0.76, and in the report just published for the year 1883 it was 0.55.

Epidemics of other diseases, small-pox for example, subside as completely as did that of puerperal fever in 1826, but they more frequently linger on, the epidemic influence getting less and less active till a new wave approaches, and overlaps that which was disappearing. This seems to have been the case in the epidemics of 1845 and 1854. The report of the hospital published by Johnston and Sinclair of the seven years preceding Dr. M'Clintock's Mastership, enables us to trace it. Unfortunately we have no details for 1846, but in 1847, when Dr. Charles Johnson's Mastership terminated and Dr. Shekleton's began, the disease was still prevalent, or probably there had been a recrudescence of the epidemic. During the months of November and December of that year, with which the report commences, the total mortality was at the rate of 7.02 per cent. In the following year it fell to 1.81 and continued to fall till 1852, when it reached the minimum of 0.56. The new wave now manifested itself. In 1853 the mortality was 0.88; in the beginning of 1854 it was 1.13; and in the latter months of that year the epidemic, as we have already seen, was in full force, and the mortality reached 11.53 per cent.

The following tables, calculated from Johnston and Sinclair's report, show the total mortality and the mortality from puerperal fever:

TABLE I.—*Total Mortality.*

1847 Nov. & Dec.	17	in	242	deliveries	= 7.02	per cent., or 1 in 14.23
1848	33	"	1,823	"	= 1.81	" 1 " 55.2
1849	37	"	2,063	"	= 1.79	" 1 " 55.7
1850	17	"	1,982	"	= 0.85	" 1 " 114.0
1851	14	"	2,070	"	= 0.67	" 1 " 147.8
1852	11	"	1,963	"	= 0.56	" 1 " 178.0
1853	17	"	1,926	"	= 0.88	" 1 " 113.3
1854	19	"	1,679	"	= 1.13	" 1 " 88.3
Total ...	165[1]					

[1] An error of 2, owing to a misprint in the Report. Total mortality from all causes was only 163 = 1.85 per cent.

TABLE II.—*Puerperal Fever.*

1847 Nov. & Dec.	} 10	cases of	puerperal fever,	9	died, = 90	per cent.
1848.....	43	"	"	23	" = 53.48	"
1849.....	29	"	"	19	" = 65.55	"
1850.....	15	"	"	2	" = 13.33	"
1851.....	10	"	"	5	" = 50	"
1852.....	3	"	"	2	" = 66	"
1853.....	8	"	"	5	" = 62.5	"
1854.....	11	"	"	10	" = 90.9	"

In Dr. M'Clintock's report of the epidemic of 1854–5 it appears the hospital was closed in the latter part of December and all January. It is not directly so stated, but it would appear that it was opened again in February, but the disease showed itself among the new set of patients—two were attacked on February 8th, two on the 9th, and two on the 10th. We had a similar experience in the Coombe Hospital in the early part of 1880. The hospital was completely rebuilt and newly furnished three years before. Fever manifested itself in the early part of the year, and in March the hospital was closed. The whole house was cleaned, the walls and ceiling scraped and whitened, the floors saturated with wax and turpentine, and everything thoroughly cleaned. It was re-opened in April, every alternate bed being left unoccupied; again the fever showed itself, and again the house was closed. The hospital consists of two buildings, about twenty yards apart from one another. The second building is used for gynæcic cases. The patients were transposed—the gynæcic cases were moved to the labor wards, and all new labor cases were taken into the gynæcic wards; but again the fever manifested itself among the labor cases. The other patients (transferred to what was supposed to be an infected house) remained perfectly healthy. The evidence here seems conclusive that the disease was not the result of "Hospitalism."

Another feature of the disease of almost equal importance manifested itself on this occasion, as showing its true nature. As the epidemic subsided, and the patients who were attacked began to recover, they got pelvic cellulitis, and at the same time many cases of the same kind came into the house from among the patients who had been confined at their homes. At first, suppuration and the formation of abscesses was the rule in these cases, but after a little the majority got well by resolution. The epidemic had expended its force.

In many of the recorded epidemics the occurrence of cases of typhus fever and of scarlatina at their beginning is noted, and it might be said that they were epidemics of these diseases and not puerperal fever at all.

The eighty-nine cases recorded by Dr. Braxton Hicks in his paper on "Puerperal Diseases"[1] may lead some to adopt this view, but a careful examination of his cases will show that they prove only that scarlatina and other diseases may, and frequently do, occur in the puerperal state. They occur in a similar manner after surgical operations, and seriously influence the result, but do not prove that puerperal is scarlatina fever, or the converse. If you sow thistles you will grow thistles, and if you sow scarlatina the crop will be scarlatina. One case mentioned by Dr. McClintock affords evidence, however, of the clearest character that the disease was not scarlatina. "A woman recovering from scarlatina, which attacked her soon after delivery, was seized with symptoms of peritonitis (phrase often used by Dr. McClintock as synonymous with puerperal fever) on the tenth day, under which she rapidly sank." It must be admitted that it is in the highest degree improbable that if the epidemic disease was scarlatina it would affect a patient in this manner who was only just recovering from the same disease. It is worthy of remark that, though he makes special allusion to the health of the children, and to the absence of trismus and convulsions, which had been of frequent occurrence in the epidemic of 1845, Dr. McClintock does not describe a singe case of scarlatina as having occurred among the children of the women attacked by puerperal fever. Nor can it be said the patients died too soon to allow of the appearance of the characteristic eruption. The eruption of scarlatina appears on the second day of the fever. None of the patients died within this time; one died in 50 hours from the period of invasion, one in 60, and two in 72. These were the most rapid cases. Four or five days was the average time that patients lived after being seized with a fatal attack of the fever.

The foregoing evidence seems to me to prove irresistibly the existence of a specific epidemic influence. Much more might be adduced to the same effect. Dr. Lusk[2] tells us that in the year 1871 the mortality from childbed in New York was 399; in 1872, 503; in 1873, 431; in 1874, 439; and in 1875, 420. The excess in the deaths for 1872, he says, was due wholly to an increase in the cases of metria, those from ordinary accidents remaining nearly the same as in the preceding years. The disease certainly did not extend into the city from the hospitals serving as foci, for the mortality at Bellevue Hospital was scarcely more than half the usual average. There was no especial mortality that year from either diphtheria, erysipelas, or scarlatina, but the aggregate mortality was the largest known in the history of the city.

Dr. Fordyce Barker, in the recent discussion at the New York Academy of Medicine, alluded to the great puerperal mortality of 1872, and attributed it to epidemic influence. In five of the best wards of the city, he said, in which are the residences of a great proportion of those of wealth, and few of the class of dwellings known as tenement houses, with a population of 307,046, there were eighty deaths from puerperal fever, while in the remaining wards of the city, with a population of 605,245, there were but sixty-three deaths—that is, nearly one-third less, in proportion to the population, than in the best parts.

Epidemic disease is defined to be "a disease prevalent among a people or a community at a special time, and produced by some special cause or causes not naturally or generally present in the affected locality, as distinguished from an endemic disease."[3] The facts now mentioned seem to me to prove that there is a large group of puerperal cases that come strictly within this definition, and that the epidemic thus constituted is a specific disease.

It is taught, however, by many that puerperal fever is nothing else but poisoning with septic matter from the genital organs.[3]

This theory seems to me to be defective, inasmuch as it does not embrace the foregoing facts.

As stated by Schroeder, it involves the following propositions:

1. Puerperal fever is caused by the absorption of septic matter from the genital organs. It is nothing but poisoning with septic matter.

2. The infecting matter is found everywhere where organic compounds decompose. It may be derived from dead bodies, suppurating wounds, disintegrating neoplasms, and especially the secretions of diseased and sometimes also of healthy puerperal women.

3. Fresh wounds are necessary for the absorption of septic matter. Wounds in a state of granulation do not absorb, but if the granulations be absorbed, or the surface of the wound broken, then it becomes an absorbing surface.

4. The septic matter is never absorbed through the intact skin or mucous membrane, through the lungs or intestinal canal.

5. The septic matter may be generated within the patient herself—self or auto-infection; or be introduced from without—external or hetero-infection.

6. Self or auto-infection is most likely to occur when the wounds are fresh—that is, when at the birth of the child there are already decomposed materials, as from a

[1] Transactions of Obstetrical Society of London, vol. xii.

[1] Science and Art of Midwifery. London: H. K. Lewis. 1884.
[2] New Sydenham Society's Lexicon.
[3] A Manual of Midwifery. By Karl Schroeder.

decomposed fœtus, gangrene of the soft parts established before delivery, or when new growths, as carcinoma, rapidly undergo decomposition. Retained membranes and placentæ are rarely the cause, because by the time they begin to decompose the wounds have ceased to be in an absorbing condition.

7. Hetero-infection, or infection from without, arises from the direct application of septic matter to recent wounds in the genital organs by means of the sponge or linen used in cleaning the parts, by instruments, or by the examining finger. It takes place most frequently through lacerations in the cervix.

8. It may possibly be caused by septic matter floating in the air, but there are no cogent reasons for such an assumption.

9. The definition shows there is nothing specific in puerperal fever. It is the same state which is frequently observed in surgical wards, and designated as erysipelas, pyæmia, ichoræmia, and septicæmia.

Such is the septicæmic theory as to the nature of puerperal fever. Those who hold it look on the disease as preventable, and assert that its occurence is due either to ignorance of the precautions necessary to prevent it, or to failure in seeing that such precautions are rigorously carried out. These precautions are of a very elaborate character. They have been very fully set out in a paper read before the New York Academy of Medicine in December last, by Dr. Gaillard Thomas. They are to be put in force in private dwellings of all classes as well as in hospitals. When a confinement is expected the patient's room is to be carefully prepared, all curtains and upholstery to be removed, the ceilings and floors are to be washed with a solution of carbolic acid or bichloride of mercury. The bedstead and mattress to be sponged with the same solution. The nurses and physician are to take care that all their clothing is free from septic infection. If they have been exposed to the effluvia of septic diseases, such as typhus or erysipelas, their clothing is to be changed and their bodies thoroughly sponged with a saturated solution of boracic acid. As labor sets in the nurse is to wash her hands, remove the dirt from under her nails, and give the patient an antiseptic injection every four hours. The physician is also to wash his hands and attend to his nails; and, after washing, both doctor and nurse are to soak their hands for several minutes in a solution of bichloride of mercury. Labor being complete, the third stage being carefully attended to, the physician is to examine the vulva of the patient; if the perineum have been ruptured it is to be closed by suture; if slight lacerations have occurred they are to be dressed with a solution of carbolic acid and persulphate of iron, and painted over with collodion. The patient is to take ergot three times a day for a week, to have the vagina syringed out with an antiseptic lotion every eight hours —twice as often if the labor has been an instrumental or difficult one—and, after each syringing, a pessary of iodoform and cocoa-nut butter is to be introduced into the vagina, the nurse being careful to disinfect her hands before every approach to the genital tract of the woman.

In corroboration of their views, the advocates of the theory appeal to the results which they have obtained by adopting some such mode of preventive treatment as that laid down by Dr. Thomas. But the history of great hospitals, such as that of Dublin or Vienna, shows that puerperal fever will prevail and cause sad mortality at times, and disappear again, and that the conditions governing its movements have not yet been discovered. Dr. Collins' precautions, compared to those recommended by Dr. Thomas, were very simple indeed. "All the beds in the hospital are composed," he says, "of straw, nor is any one used more than a second time without the cover having been washed and the straw renewed. In every instance where the patient *dies* this is at once done, and, should the most remote symptom of *fever* have been present, every article connected with the bedding is instantly scoured and stoved; the wood-work and floor washed with the chloride of lime solution, and the entire ward whitewashed."

To these precautions, along with strict attention to ventilation, he attributes the complete disappearance of puerperal fever, and the fact that his mortality during the last four years of his Mastership was the lowest that had ever been recorded. The gentleman who immediately succeeded Dr. Collins in the Mastership was his near relative, his pupil and assistant, and it may be fairly assumed did not relax his attention to the means that had been so successful with his predecessor; yet we find that the mortality during his Mastership was nearly double the total mortality of Dr. Collins' Mastership, more than three times that of Dr. Collins' fours years' exemption from fever, and the highest recorded in the hospital during the first hundred years of its existence.

The experience of the Vienna hospital is not less remarkable. "It is familiarly known," Dr. Lusk tells us, "that after Semelweiss had introduced the practice among the physicians attending patients at the large lying-in hospital at Vienna of washing the hands in a solution of chloride of lime, there was a great diminution in the mortality which prevailed, notwithstanding which G. Brann reports, however, that in 1857, in the month of July, in 245 deliveries there were 17 deaths. The following month Prof. Klein gave orders to suspend the use of disinfectants. By chance in August there were only 6 deaths out of 250 confinements, and in September of 275 patients none died. From 1857 to 1860 the mortality was slight, though disinfectants were not used; while during the three following years, in spite of the systematic and persistent employment of those agents, the death-rate once more assumed formidable proportions."

Such experiences are no doubt discouraging. The precautions of the present day are, however, much more elaborate than those of Collins and of Semelweiss, and, let us differ as to our theories as we may, we will all unite in the earnest desire that they may prove, not only still more efficient, but more permanent in their effects.

CEREBRAL LOCALIZATION—THE CENTRES FOR VISION.

By PHILIP ZENNER, A.M., M.D.,

CINCINNATI, O.

The present theories of cerebral localization, which assign to the various parts of the cortex distinct and different functions, are of very recent origin. The teaching of Flourens, that the removal of any portion of the hemispheres will affect all the cerebral functions alike, and that therefore every part of the cortex performs the same functions, had complete sway in the medical world for nearly half a century. The observations of Broca, that certain disturbances of speech were apparently caused by lesions in a limited part of the frontal lobes, were the first to point to the incorrectness of that teaching. Then Meynert made his profound researches in the anatomy of the brain, and with an acumen rarely equalled, combining the results of anatomical investigations with clinical and pathological observations, concluded that the anterior portion of the hemispheres possessed motor, the posterior sensory functions. Hughlings-Jackson, also, through pathological and clinical studies, arrived at similar results as to the motor areas. Lastly, a long series of experiments in animals seemed to confirm previous results, and to map out with wonderful precision a new cerebral topography.

These theories of localization, arrived at by so many and independent methods, seem but a necessary corollary of a deeper insight into the nature of psychical activity. Nevertheless they have not yet found general, or, at least, not universal acceptance. Some observations in man, but especially the experiments of an eminent physiologist—Goltz, of Strassburg—have apparently afforded a well-grounded doubt of the correctness of what had al-

most been accepted as ascertained facts. Goltz arrives at conclusions very similar to those of Flourens.

In this state of uncertainty apparently existing, it may not be without definite results to examine the subject from a very limited standpoint; and, taking in consideration all the means of research, attempt to arrive at positive conclusions as to the localization of a single cerebral function.

I propose in these papers to thus investigate the subject, the cerebral centres for vision. It will be my effort to bring to bear in that investigation all that has as yet been contributed that is of value in its elucidation. While I attempt to treat the subject as briefly and clearly as possible, I wish to enter sufficiently into detail to enable each reader to draw his own conclusions from the data given.[1]

To facilitate our investigations, we will examine the subject from three various standpoints, that is, the evidence afforded by anatomical, physiological, and pathological data.

ANATOMICAL DATA.

The optic nerves and their prolongations, the optic tracts, can be followed with little difficulty into some of the large ganglionic masses at the base of the brain, that is the optic thalami, the anterior corpora quadrigemina, and the external and internal geniculate bodies. The fibres passing to the internal geniculate bodies, and therefore these bodies themselves, are not connected with the sense of vision. This knowledge is gained from experimental and pathological observations, some of which will be mentioned further on, but need not be considered now. The other ganglia mentioned—the optic thalami, or rather the nuclei of gray matter, in their posterior portions termed pulvinar, the external geniculate bodies, and the anterior corpora quadrigemina—may then properly be termed the basal ganglia of vision. From these masses of gray matter fibres pass in the corona radiata to the cortex of the hemispheres. Such fibres were already clearly observed by Gratiolet and described as optic radiations, and were, at a later period, more fully traced out by Meynert. These optic radiations were described as passing from the ganglia at base to the cortex of the occipital and temporal lobes; but the fibres passing to the latter are apparently those coming from the internal geniculate bodies, and therefore are not connected with vision. In the most recent systematic work on the anatomy of the brain (Wernicke, 1881), the optic radiations are described as passing only to the occipital lobes.

This anatomical exposition might be deemed sufficient for the solution of our problem, and give us the requisite information as to the part of the cortex in which is situated the centre for vision. For the optic nerves, whose functions are known, are distinctly followed into one set of ganglia, and from the latter other fibres are described as passing to a limited portion of the cerebral cortex. And, in fact, these anatomical data would be quite sufficient for our purposes if every part could be established beyond a doubt. But we are dealing with the most intricate parts of the bodily organism, where facts are largely inferred rather than clearly seen and proven. It cannot be stated with certainty from the simple anatomical investigations that the fibres passing to and from the basal ganglia are either the immediate or mediate continuations of one another, nor amidst that interminally intricate network of the centrum ovale, that the so-called optic radiations pass only to the occipital lobes. If both these facts be proven, we then have cause to admire the success of those indefatigable anatomists who were first to point out great physiolgical truths, but their researches alone can scarcely be accepted as proving these controverted points. But while such difficulties are encountered in tracing out, by ordinary methods, the course of nervous strands amidst countless intermingling strands of the same kind, we are often greatly assisted by the results of certain pathological changes. Thus degenerative changes may occur in a single system of nerve fibres which will enable us to distinguish it from the surrounding healthy tissues and follow its whole course from its inception to its termination. Such degenerated tracts, subservient for anatomical and physiological studies, are sometimes found after pathological lesions, or may be directly obtained by experimental destruction of tissues. Waller, an English physiologist, pointed out, many years ago, the cause and course of these secondary degenerations in developed nervous tissues. The principle proclaimed by him, and since termed the Wallerian law, is that nervous tracts degenerate when separated from their nervous centres. They degenerate in the direction in which they convey impulses, those conveying centripetal impulses in a centripetal, those conveying centrifugal impulses in a centrifugal direction, and throughout their whole extent beyond the point of injury, no matter whether they be fibres in a peripheral nerve or in the central nervous system.

To what extent this Wallerian degeneration will assist us in our present anatomical studies will appear further on. But far more valuable in these investigations are degenerative changes following destruction of different parts at the earliest periods of extra-uterine life; for here there occurs, in addition to the secondary degenerations, a lack of development in the tissues, and thus whole nervous strands can be more distinctly mapped out. This method was first methodically instituted by von Gudden, of Munich. He enucleated the eyes of new-born animals, also removed various parts of the brain, and when the animals arrived at comparative maturity, noted the changes resulting from these early mutilations. He states that, when under such circumstances a nervous tract is severed, it will degenerate throughout its whole extent. Also atrophy of nervous centres may follow such injuries. Thus in case one centre is destroyed which is a source of excitation to another, then the latter degenerates. This degeneration in the excited centre will occur if only its connection with the exciting one is severed. But an influence in the opposite direction, that is, of the excited on the exciting centre is not found. It is possible that this law of Gudden does not properly represent all the facts in the case; but, as we will see immediately, it at least enables us to differentiate and follow the course of separate anatomical tracts. It need scarcely be mentioned that we will consider results thus obtained only so far as they throw light on the centres of sight.

Course of the optic nerve.—The first experiments of Gudden were performed for the purpose of determining the course of the optic nerves in the optic chiasms. Since the time of Isaac Newton it has been taught that in man there is a semi-decussation of the optic nerves in the chiasm, and only in recent times was that statement questioned, when, on the ground of anatomical investigations, Mendelstamm, Michel, and others concluded that there was complete decussation of the optic nerves in man. I would not enter into this question here, were it not that its answer throws light upon some of the final questions with which we have to do, and that there is a prevalent opinion that it has not yet been definitely settled.

As above stated, the doubt cast upon previous belief of semi-decussation arose simply from anatomical investigations, and these are quite insufficient to decide this matter.

Meynert, than whom there has been no abler researcher into the cerebral structures, after a careful examination of prepared sections, stated that he could not therefrom determine whether there was complete crossing, or semi-decussation of the nerves in the chiasm; and Gudden, in explanation of this difficulty, states that in addition to

[1] When writing this paper I was not aware that the subject had been previously treated in a similar manner, but have since received a work of Mauthner's (Gehirn und Auge, 1881) wherein he goes over the same ground. But inasmuch as the most valuable part of the material here collected together has been contributed since Mauthner's book was published, I trust these papers will not be without value in conveying knowledge of what has already been acquired on this subject, or removing any doubts formerly entertained.

the endless entanglement of the fibres, they pass from higher to lower planes in their course, and therefore could not possibly be followed throughout an anatomical section. H. Müller[1] asserted as a law that in animals with monocular vision there is complete crossing of the optic nerves, and that as the axes of the eyes become more nearly parallel, and therefore there is more complete binocular vision, there is more nearly a semi-decussation of the nerves in the optic chiasm. In fishes there is complete crossing of the nerves. Here the crossing is very evident, as the two nerves merely overlie one another in crossing. Gudden at first believed that the same was true of rabbits, until his experiments taught him that here a small part of each optic nerve passes into the optic tract of the same side. Gudden's[2] experiments for the purpose of determining the course of the optic nerves were first performed on dogs and rabbits. He enucleated either one or both eyes very soon after birth, and when the animals had arrived at comparative maturity, killed them and carefully examined the removed parts. He found, in dogs, after enucleation of one eye, atrophy of the corresponding optic nerves, and reduction in size of both optic tracts, that one being always the smaller which was on the side opposite to the atrophied optic nerve. Similar changes could be produced by destruction of the visual ganglia. When the left external geniculate body, anterior corpus quadrigeminum, and optic thalamus had been destroyed, there was complete atrophy of the left optic tract, and reduction in the size of both optic nerves, the right being smaller than the left. If both eyes were enucleated, atrophy of both nerves and both tracts followed. These results of Gudden had been corroborated by various other experimenters, some of whom will be referred to farther on. If after them there could be any doubt of the semi-decussation[3] of the optic nerves in the higher animals, this doubt would be removed by the later experiments of Nicati,[4] in which, after the median, antero-posterior section of the chiasm in cats, the latter still retained their vision. Similar experiments have since been made by Bechterew[5] on dogs with like results. Atrophy of both optic tracts in man, after blindness in one eye and atrophy of the corresponding optic nerve, has been recorded by Gudden,[6] Adamük,[7] Putscher,[8] Marchand,[9] Deutschman,[10] Burdach,[11] and others, and we will have occasion to mention at a later period cases in which with disease of one optic tract blindness on the same side of each eye was observed during life.

Relation of optic nerves to visual ganglia and cerebral hemispheres.—We have thus been enabled to follow the course of the optic nerves through the chiasm and optic tracts, and must now attempt to follow the latter into the cerebral ganglia and hemispheres. Their primary termination is very easily determined. After enucleation of the eyes, by the method above mentioned, there is found atrophy not only of the optic nerves and tracts, but also of the anterior corpora quadrigemina, the external geniculate bodies, and the posterior gray nucleus of the optic thalamus (pulvinar). The atrophy of these ganglia occurs so uniformly that we need not hesitate in stating that they are immediately connected with the optic nerves, and therefore directly related to the sense of vision.[12] For the sake of brevity I will hereafter speak of these ganglia conjointly as the primary visual centres. Our next object must be to determine their relation to the hemispheres.

[1] Cited by von Gudden.
[2] Gudden's contributions on this subject appear chiefly in Graefe's Archives vols. xxi., xxv., and xxvi.
[3] Partial decussation would be a more correct expression. I have here employed the other, and will continue to do so, as it is almost always used.
[4] Archiv. de Physiologie, 1878.
[5] Klin. Monatsblatt Augenheilkunde, Bd. xxi., 1883.
[6] Archiv f. Ophthal., Bd. xxv., 1879.
[7] Ibid., xxvi., 1880.
[8] Ibid.
[9] Ibid., Bd. xxviii., 1882.
[10] Ibid., Bd. xxix., 1883.
[11] Ibid.
[12] In some of the instances mentioned, of atrophy of optic nerves in man being followed by atrophy of both tracts, degenerative changes in these ganglia on both sides was also observed.

With this object parts of the hemisphere were removed in new-born animals, and after sufficient time had elapsed the efforts of such mutilations were carefully observed. Such experiments were made by Gudden[1] and Ganser,[2] of Munich, and Monakow,[3] of St. Pirminsberg, Switzerland. The results of these experiments all coincided in so far that removal of the posterior part of a hemisphere was followed by a degree of atrophy of the primary centres of the same side.

The most valuable experiments were those of Monakow. He always succeeded in obtaining atrophy of the primary visual centres in rabbits after removal of a very limited portion in the occipital region, a part corresponding to the area in the dog which Munk has termed the visual area, of which we will soon have occasion to know more. Monakow also found that removal of other parts of the hemispheres, while followed by atrophy of other subcortical centres, did not affect the primary visual centres, so that the conclusion appeared logical that the latter are anatomically connected with a limited area of the cortex in the occipital region.

Nevertheless such conclusions might be too hastily drawn. For in these experiments not only is the cortex removed, but the underlying white brain matter necessarily injured, and thereby fibres may be severed which pass to other portions of the brain. To avoid this source of error Monakow resorted to another series of very careful and ingenious experiments (on rabbits). After removal of the area in the occipital region already referred to, he found not only atrophy of the primary visual centres, but also atrophy of the fibres of the corona radiata passing from this part of cortex to these centres. He now severed these fibres in the midst of their course, and subsequently observed the effects of their division. (Operation, like the others, on new-born animals, which were then kept alive for weeks or months.) In such instances there was subsequently found atrophy of the severed fibres of the corona radiata both on the peripheral and central side of the section—the same changes in the primary visual centres as after removal of the hemispheres—and atrophy of the corresponding part of the cortex. A microscopical examination of the latter showed that only a part of the cortex was atrophied—the third and fifth layers—those containing the large pyramidal cells.

This experiment was made many times, so as to secure accuracy both as to the locality and nature of the changes, and seems to leave no room for doubt that, in rabbits, the primary visual centres are directly connected with a limited area in the cerebral cortex.

The primary visual centres are, then, connected on the one side with the cortex through fibres of the corona radiata, on the other, with the retina through the optic nerves. Each set of fibres probably terminates in these ganglia, and, it will not be difficult to show, are mediately or immediately connected with one another. The atrophied elements found in these ganglia after removal of the eye or cortex are different according as the one or other is the source of atrophy. Some layers uniformly degenerate when the eye is removed, others when part of the brain has been extirpated. Nevertheless there are certain parts which atrophy alike from either cause, proving the relationship of the two systems of fibres.[4] But this relationship can be more positively proven in another way, that is, by the atrophy found in the optic nerves subsequent to removal of those portions of the cortex with which we are now concerned. It is true, in rabbits, after removal of the hemispheres degenerative changes cannot be followed beyond the primary visual centres. But in rabbits the hemispheres are so little developed that their destruction does not appear to have a far-

[1] Loc. cit.
[2] Archiv f. Psychiatrie, Bd., xiii., 1882.
[3] Ibid., Bd. xiv. 1883.
[4] It would lead too far to enter further into the subject here. For the microscopical structure of these ganglia, and the changes taking place in them in these experiments, I must refer to the original works of Ganser and Monakow.

reaching influence on the peripheral nerve structures. But it is quite different in higher animals, where the hemispheres are more fully developed. In a dog (Gudden)[1] and in cats (Ganser and Monakow) removal of a hemisphere was followed not only by the usual changes in the primary visual centres, but also by atrophy of the corresponding optic tract, and in both optic nerves, proving indubitably the direct relationship between the hemispheres and optic nerves. The exact portion of the hemispheres was not determined, though in all of them the posterior part was removed. But Monakow believes—inasmuch as he succeeded with small mutilations in the occipital region in producing these changes, while the removal of large parts of the frontal lobes caused no changes in the optic nerves—that the cortical visual area is in the same part in cats and dogs as he had already located it in rabbits.

Experiments have also been made in an opposite direction, that is, to determine the effect of enucleation of the eye on the cerebral cortex. Munk [2] and Vulpian [3] have observed atrophy in the occipital region as the result of such experiments (on dogs), but inasmuch as others, Furstner [4] and Gudden [5] (on dogs), and Ganser [6] and Monakow [7] (on cats), have obtained negative results, we must leave this question as still open. But it is not probable that much can be gained by such experiments, both on account of the improbability of decided changes occurring, and the difficulty of detecting them if any exist.

It is quite justifiable to draw from the above experiments certain, though guarded, conclusions as to the anatomical relations in man. But Monakow, to whom we owe so much of the above researches, has also been enabled to make some observations on human beings which add to the force of such conclusions. He had an opportunity to examine the brain of an eight-months' fœtus with a parencephalic defect in both hemispheres. There was entire destruction of both occipital lobes, and of the superior portion of the parietal lobes, and, as a result (for everything pointed to its being secondary to the former), atrophy of the primary visual centres and both optic nerves and tracts. In another case, a man seventy years of age, there was softening of the occipital lobe of probably five years' standing, and also atrophy of the corresponding primary visual centres, and optic tract, and nerves. In both these instances, it is true, the disease involved also the white substance of the brain, so that taken alone they do not prove that the affected portion of the cortex is connected with the optic nerves. But taken together with the facts, that, in these instances, other subcortical centres, not in relation with the occipital lobes remained normal, these cases add greatly to the probability gained from the previous experiments that the visual area in man is in the posterior portion of the brain.

The only other observations with which I am acquainted which point directly to such anatomical relations in man are two cases reported by Hugenin.[8] In these he found, subsequent to atrophy of the optic nerves, atrophy of the "cortex of the occipital lobes, where the occipital fissure cuts into the margin of the convexity." In the first case, a man fifty-six years of age, blind three or four years in the left eye, he found these changes in both occipital lobes, but more marked on the side opposite to the affected eye. In the second, a woman forty-two years of age, nearly blind in both eyes from infancy (result of variola), he found the same changes, but alike on each side. When reported a microscopical examination had not been made.

[1] At the time Gudden attributed the changes in the nerves to accidental causes, but the results of subsequent experiments leave little room for doubt that there was here a causal relationship.
[2] Ueber die Fuctionen der Grosshirnrinde.
[3] Cited by Munk.
[4] Archiv f. Psychiatrie, 1882.
[5] Loc. cit.
[6] Loc. cit.
[7] Loc. cit.
[8] Correspondenzbl. f. Schweitzer Aerzte, 1878, No. 22.

These observations of Hugenin stand alone.[1] For this as well as for other reasons, partly already referred to, they cannot be accepted as more than doubtful evidence in our present investigation. Herewith we have completed the first part of our subject, the evidence furnished by anatomical data of the locality of the cerebral centres of vision. A brief summary of what has been said will give us a clearer oversight of the subject.

1. Simple anatomical researches teach us that the optic nerves enter the primary visual centres, and that fibres pass from these ganglia to the occipital lobes. On account of the intrinsic difficulties of these investigations they cannot be accepted as conclusive.

2. Experimental investigation has proven that in higher animals the optic nerves do not entirely cross in the optic chiasm. In man the same has been proven by other means.

3. In rabbits experimental researches (Monakow) have shown a close relationship between the retinæ and a limited area in the occipital region, the visual area of Munk.

4. In higher animals (dogs and cats) similar experiments have demonstrated a relationship between the retinæ and the posterior part of the hemispheres. The exact area has not yet been definitely located, though it is probably the so-called visual area.

5. Observations on a human fœtus and pathological changes in an adult brain (Monakow), together with the former considerations, make it highly probable that the same anatomical relations exist in man.

6. Further evidence for this relationship in man are two instances (Hugenin) of atrophy of occipital lobes following atrophy of the optic nerves. But this evidence must be accepted as of doubtful value.

PRACTICAL OBSERVATIONS ON THE HUMAN EAR AND ITS DISEASES, WITH ILLUSTRATIVE CASES.

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I.—The External Ear.

(Continued from No. 717, p. 122.)

It has been claimed that a distinction should be made between othæmatoma and "idiopathic" perichondritis of the ear. They are thus considered as separate and distinct affections by Dr. H. Knapp,[2] who says that "the majority of authors mention the inflammation of the perichondrium under the head of the much-discussed othæmatoma, with which, by Kramer and others, perichondritis auriculæ is used as a synonymous term." Dr. Knapp presents a case of the latter disease from which it is alleged no blood at any time escaped after the cyst was punctured, and that it was not, therefore, a case of othæmatoma. This statement, coming from so reputable an authority, is certainly misleading, since it is well known that in no case of othæmatoma is perichondritis absent, and that, moreover, the contents of the tumor in "othæmatoma" are frequently serous.

A peculiar variety of othæmatoma remains to be mentioned which is not always easily distinguishable from hyperæmia, a condition that I have myself only met with in the insane, where it is probably due to protracted and violent rubbing of the auricle. Any portion of the perichondrium may be involved, but it is usually limited to a small space. Thickening is often scarcely observable, and to the feel it is not "doughy." The deep-seated nature of the inflamed or congested region, however, may be discovered by stretching out the auricle between the observer's eye and a strong light. The effusion is not

[1] Mickel reported a case with extensive changes in the cortex after blindness of probably twenty years' duration. In this instance not only are the changes very diffuse, but there is no evidence that they were secondary to the ocular disease.
[2] Perichrondritis Auriculæ, Archiv. Otology, vol. ix., p. 195 et. seq., 1880.

sufficient to form a tumor; such cases seem to present the characteristics of the first stage of othæmatoma. The following case is an example of this condition.

Case V.—Ignatius J——, aged forty, was admitted to the New York City Asylum for the Insane, August 18, 1883, with dementia. Had to be fed with stomach-tube; was a mere skeleton. He finally improved very much mentally and physically, and on October 21st was up and around and eating and sleeping well. October 28th, slight hæmatoma was observed to be developing in left ear at inferior portion of concha, at its junction with the meatus. My own examination, on November 27, 1883, is thus recorded by Dr. Barclay: The left auricle, which is very thin, is of a dusky red color. The concha, which was naturally large, is much thickened as far as the meatus, and especially is it narrowed laterally by the thickening of its posterior and inner wall; it is, in fact, almost obliterated. No sacculated fluid was ever discovered.

It is notable in this case that the hæmatoma came on at the stage of mitigation of chronic meningitis, and that it was confined to the concha. Its benign condition rendered treatment unnecessary.

Termination.—It will be found that among any considerable collection of lunatics or prize-fighters, a very considerable number have their ears more or less deformed by previous attacks of othæmatoma. The writer has found this condition of things in several large asylums for the insane; and recently, in the vicinity of Madison Square Garden, on the eve of a sparring exhibition, he observed a number of persons with ears thus deformed. In some lunatics, where well-marked deformity presents itself in one auricle, the other will be found so slightly deranged as to be liable to escape detection altogether unless closely scrutinized, and in others scarcely any observable thickening will be found in the affected organ, the deeper coloring alone affording evidence to the eye, whilst the slight induration, thickening, and immobility of the skin are not to be detected without careful handling.

It seems exceedingly probable to the writer that in certain cases where the alienist is in doubt as to the sanity of a patient, valuable confirmatory evidence of previous mental trouble might be obtained by an examination of the ears. Where the deformity is great, in consequence of an extensive area of cartilage having been exposed by detachment of its perichondrium, the skin on the outer surface will usually be found to be immovable, whilst that on the inner surface remains unchanged. In these cases the concha is liable to be much reduced in dimensions, its posterior wall being often so much thickened that a narrow vertical slit only remains in front of the meatus externus, preventing the introduction of any but a speculum of the smallest size. It is scarcely necessary to add that the deformity arising from othæmatoma is not influenced by the mental condition of the patient.

The characteristic deformity resulting from othæmatoma is well shown in the following cases:

Case VI.—Joseph B——, admitted to the New York City Asylum for the Insane, May, 1883, was wild, maniacal, noisy, and violent; made unprovoked attacks on his fellow-patients; was put on sedatives and became quieter, but began tearing his clothes. About June 30th two hæmatomas of considerable size developed. He was then excitable, destructive, and filthy. The left hæmatoma ruptured about July 9th. July 30th, symptoms of excitement, etc., unabated; a slight discharge of blood from the ruptured cyst. August 30th, the left ear began to shrivel up with reabsorption of the effused fluid. Since August 20th has given very little trouble, and is now (February 4, 1884) quiet and well-behaved. Both hæmatomas are quiet, and the ears have a shrivelled appearance. Fig. 5 shows the deformity of one of the ears (the left).

Case VII.—Hugh S——, aged forty-three, admitted to New York City Asylum for the Insane, September, 1879, Was demented for one year before admission; is noisy and excitable at times. Bodily condition not good. Was discharged in September, 1880, and readmitted March 1, 1881. Is incoherent; prays a great deal—thinks he

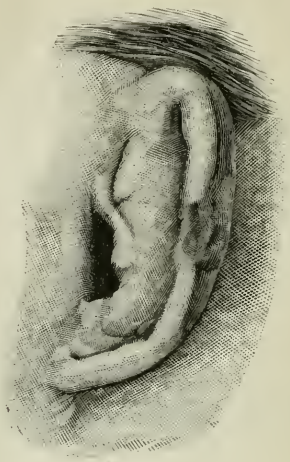

Fig. 5.

is a great sinner. March 10th, greatly excited, laughs, talks and sings; is filthy. Excitement increased during the summer, and in autumn his physical condition improved. He continued to have hallucinations, was hard to control, and tore his clothing, etc., up to the time

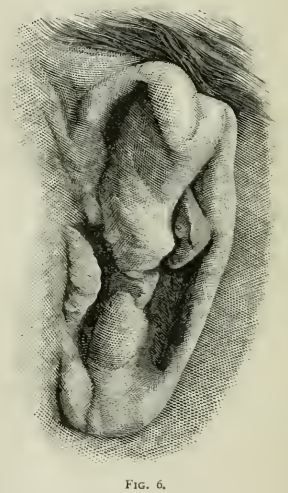

Fig. 6.

the writer saw him, in January, 1884. Fig. 6 shows the condition of the left ear.[1] The history gives no account of the time of its appearance or progress.

PATHOLOGY OF OTHÆMATOMA.

After what has been previously stated in respect to this affection there remains but little to be said concerning its pathology. Those interested in the early attempts to clear up the subject will find the matter discussed by M. Ferris, Franz Fischer, M. Foville, Virchow, and others. There seems to be but little doubt of the existence in many lunatics and inebriates of incipient

[1] The author is indebted to Dr. Trautman for the excellent photographs from which Figs. 3, 4, 5, and 6 were taken.

softening and disintegration in the tissues of the auricle, which predispose to separation of the perichondrium from the cartilage; that this is always a factor of very great importance in the production of othæmatoma may well be doubted, since the disease is scarcely ever known to occur in advanced life, when such changes would be greatest, unless mechanical agencies intervene. The extent to which softening of the cartilage may proceed without any symptoms manifesting themselves is not, of course, known, but from the following extract it is probably very considerable. Referring to the pathological histology of the cartilaginous framework of the ear,[1] Pollak shows that specimens "which were taken from the ears of individuals who had not, so far as he could learn, been affected with any form of mental disease," had "in the cartilaginous portion of the external meatus, and especially in the antihelix, small nodules" varying in size "from a mustard-seed to a lentil." These when cut open showed to the naked eye even a departure from the normal condition of the reticulated cartilage, and sections under the microscope were found to be deprived of the fibrillated network in places, and instead there was a structureless mass. In some places the breaking-down process was even more marked. Where an actual cavity was made out, it "lay wholly within the mass of cartilage, and at no point was bounded by the perichondrium, which everywhere appeared to be perfectly healthy."

From a recent examination of a very considerable number of cases of othæmatoma occurring in both mentally sane and insane subjects, and consisting of cases in progress as well as where recovery had taken place, the writer entertains no doubt in his own mind as to the universal and immediate precedence of trauma in every instance. That the pre-existence of the disintegration spoken of above in the cartilage may influence the subsequent course of the trouble must be admitted. Othæmatoma occurring in pugilists differs in no respect from that found in lunatics, its progress being influenced by the general condition and habits of the patient in both instances.

These tumors are formed of serum, or serum and blood, which is effused, not under the skin, but under the perichondrium detached from the cartilage; the contents are not ordinarily completely liquid, but are liable to contain fibrous or gelatiniform clots, which if not evacuated attach themselves to the internal surface of the sac during the process of union between the two surfaces. Union is believed to finally take place by means of an exudation of plastic lymph. It was formerly believed that the exudation produced a new formation of cartilage, sometimes constituting a uniform layer, sometimes small patches only, which was the cause of the thickening of the ears. Virchow,[2] however, alleges that the cartilage so commonly found in these cases consists of detached portions of greater or less size, which remain adherent to the perichondrium, and are not of new formation.

In its regressive course the contents of the tumor are gradually reabsorbed or a puncture gives them exit, the surfaces gradually come in contact, and the outlines of the cartilage begin to reappear, but more or less altered in distinctness. If obliteration of the cavity is accomplished by a moderate exudation of lymph uniting its walls the deformity will be slight, especially if the tumor has been but moderately distended by fluid. On the other hand, where the perichondrium has been greatly stretched by extreme distention of the sac, it contracts upon itself as reabsorption takes place, and adaptation to the cartilage as before cannot occur; the misshapen appearance of the cartilage increases with the continued contraction during the process of adhesion. The ear finally becomes indurated, and the skin on its outer surface is immovable and follows the outlines of the distorted cartilage underneath. Sometimes the organized lymph which obliterates the cavity enormously increases the thickness of the auricle, an example of which condition is shown in Fig. 6. Where a thin plastic layer only intervenes finally, as occurred in Fig. 7, the auricle is likely to be reduced in size, and becomes comparatively thin and shrivelled; in either case permanent and characteristic deformity results.

In some cases, where the effusion has been slight or imperceptible even, the plastic exudation does not form a layer of any great magnitude; the parts early are found to have a doughy feel, and but little thickening is left behind; the mobility of the skin is less affected, and consequently the ensuing deformity is scarcely recognizable.

PROGNOSIS OF OTHÆMATOMA.

This affection probably has no prognostic value in respect to the occurrence, course, or duration of insanity; but its continuance may be much influenced by the congestion or bruising to which the auricle is subject in violent lunatics and in pugilists. The trouble cannot be said to augur against recovery, since it occurs in dementia when bodily health is improving, as in Case V., nor is it obnoxious to any particular form of insanity. In Hun's reported cases, nine of the patients died insane in the asylum, nine were discharged unimproved, and six remained when the report was made—one of them in a state of dementia.

Generally the disease runs the course already described, without any complication that endangers life, although, when extravasated blood becomes putrescent there may be danger of septic poisoning. In one instance occurring in the writer's practice (Case XI.) the sympathetic irritation about the head at one time caused considerable anxiety.

Hearing undoubtedly suffers considerable impairment in some cases through the deformity of the outstanding cartilaginous framework of the ear. In the case of a pugilist examined by the writer, whose auricle was greatly disfigured, there were permanent defects in this regard, apparently due to the interference with the normal tension of the membrana tympani—*vide* Case X.

Recurrence of the tumor is, of course, impossible, where complete obliteration of the secreting surfaces has occurred, although repeated contusions in an auricle previously affected may give rise to more or less inflammation of the organ. In several prize-fighters examined, where the ears had been previously the seat of othæmatoma, constant bruising of the organ seemed to occasion very little local disturbance.

TREATMENT OF OTHÆMATOMA.

In the treatment of othæmatoma in insane and intemperate persons, among whom it mostly occurs, besides the difficulties encountered in controlling the actions of the patient, mental disease and intemperate habits exert an unfavorable influence, and thus delay recovery. Insane persons are more obnoxious to the trouble when under great excitement, as in acute dementia; and their violent and restless movements interfere very much with treatment, whilst pugilists are indifferent, and generally neglect any advice given them. It is a safe rule in the beginning to be in no haste to interfere unless rupture of the sac be imminent, since in a certain number of cases a manifest tendency to spontaneous recovery exists.

In laying out any plan of treatment in this disease, it will be well to remember that whatever the supposed cause or causes may be, we have to deal with a perichondritis, in the treatment of which we should be guided rather by its character than by its causes. And furthermore, one should be on their guard in respect to the strong tendency to interfere in these cases; this is well expressed in a paper[1] on the subject by Dr. Wallis.

[1] Monatschrift für Ohrenheilkunde, July, 1879—Rev. in A. J. O., vol. i., pp. 302, 303.

[2] Pathologie des Tumeurs, vol. ii. Paris, 1867.

[1] Loc. cit.

This author treated these tumors as abscesses, and after incision they were poulticed and treated with stimulating lotions, "but almost always with unfavorable results—grangrene, and carious destruction of the cartilage, and not rarely death, was the end." This experience induced Dr. Wallis to fall back on nutritious diet, mild cathartics, and the local application of lead wash—in all other respects treating the swelling as a *noli me tangere*. This treatment, continued for weeks, was successful in a number of cases. Fischer came to the conclusion that eight weeks' treatment affects neither the termination nor the duration of the disease, an opinion coinciding closely with the one held by Marcé, whose belief was that othæmatoma is not influenced by any treatment, but usually remains for about four months. In regard to the views above cited, however, it should be said that the fatal results alluded to by Wallis are quite exceptional, similar experiences being unknown to other writers, while Fischer and Marcé seem to have carried the expectant plan too far, since no treatment is *not* good practice in all cases.

Practically considered, othæmatoma has an aggressive and a regressive period. All cases, however, do not range themselves under so arbitrary a division, since the affection frequently remains stationary for a longer or shorter time, and very often exacerbations occur from repeated contusions of the organ.

In its aggressive stage the observer seldom is offered an opportunity to take cognizance of the incipient symptoms; especially difficult to detect is the hyperæmia, since the auricles are nearly always in a congested state in violent lunatics and inebriates. Usually a tumor is already found to exist, and the first consideration will then be to limit its extension, if possible. If it is found that the serous or sero-sanguinolent exudation is not active, and that the quantity already present is not great, we may prescribe rest for the patient, and administer small and frequently repeated doses of the tincture of aconite root with a view to arrest the activity of the circulation of blood about the head. Locally the affected region, and beyond even, may be enveloped with a coating of collodion, the gentle and uniform pressure produced by its contraction acting as a compress, and thus promoting absorption. The following case, kindly placed under my observation by Dr. W. A. Bartlett, illustrates the treatment and progress of a case of this kind:

Case VIII.—T. F. W——, aged thirty-five, a professional gymnast, was first seen on May 15, 1884. He stated that three weeks previously he had received a "cross-counter" blow upon the left ear with gloved hand. This gave rise to no pain, but, two weeks later on, the ear was again contused by a powerful blow from the foot of a person in training. The latter injury even caused no pain at the time, but twenty-four hours later (and one week before the writer saw him), after exercising for two hours the auricle was observed to be unusually warm, and several physicians who happened to be present at the time observed that it was swollen. Dr. Bartlett, who saw the case May 11th, found a fluctuating tumor on the outer aspect of the pinna the size of an English walnut, the skin over it being hot and tense. About twenty minims of serum were withdrawn by aspiration, the last few drops of which were tinged with blood. Afterward hot fomentations were applied for a day.

The writer found, four days subsequently to the above, a tumor, slightly pinkish in color, seated at the fossa of the antihelix; it had spread itself almost equally in all directions, encroaching considerably on the concha. It had partially refilled again, was "doughy" to the feel, but not tender. Hearing was unaffected. Half a drachm of straw-colored fluid was removed by aspiration, and the tumor was painted over with collodion, the patient feeling the pressure. Small doses of tincture of aconite were ordered, and rest was advised. The next day the tumor was softer, aspiration was repeated, and the treatment continued, with the addition of compression by means of padding of cotton-wool and bandaging. Tumor seemed to be *in statu quo*, effusion having probably ceased and reabsorption commenced. A notable observation was now made.

It was found that the collodion contracting upon the tumor had made it quite tense and blanched in appearance, but that with each pulsation of the anterior auricular artery (which supplies the anterior surface of the auricle) the *entrance of the blood-supply was characterized by a glow of deep-red coloring, while the subsidence which succeeded to each distention was accompanied by blanching of the parts.* The pulsations of the temporal artery were visible above and in front of the tragus.

May 19th.—Tumefaction much less; the outlines of the antihelix reappearing. Treatment continued, excepting the aspiration. May 22d, the improvement has gone on as before; treatment same; massage cautiously commenced. Progress was now uninterrupted, the massage being gradually increased in force and frequency. By the 29th inst. no fluid remained, the "doughy" feeling was less, and the collodion was omitted. The collodion during the treatment was peeled off daily and a fresh coating applied. The aconite seemed to have a notably good effect. Scarcely any deformity was observable at this time, but the concha was still smaller than normal, and the outlines of the antihelix were not sharply outlined. The patient when discharged was directed to continue the massage for some time.

Reabsorption is sometimes retarded by the general condition of the patient, and it is alleged by some authors that a comparatively scanty distribution of lymphatics characterizes this region. Whenever this tendency manifests itself, it will be well to employ measures likely to hasten reabsorption. We may act on the presumption here that the inflammatory reaction frequently attending the regressive stage is wanting or inefficient, and proceed to employ massage or pressure. In the writer's own experience the latter has been generally unsatisfactory; the application of pressure-dressings being exceedingly difficult, in lunatics especially, who are usually unwilling to allow them to remain.

We can avail ourselves, however, of the massage treatment in all cases; it consists in pressing and rolling the affected portion of the pinna between the thumb and forefinger for some minutes or more at a time. This manipulation is usually unattended by pain, and, moreover, has this advantage, that it can, when necessary, be entrusted to sane patients themselves. At first it may be practised once or twice daily, and afterward more frequently, the length of each séance being extended as treatment progresses.

The behavior of these tumors under continued and even severe bruisings is instructive. Thus the writer, assisted by Dr. W. A. Bartlett, recently made a study of othæmatomata in pugilists, which showed that recovery was not impossible under apparently unfavorable conditions, although it should be added that unsightly deformity remained. The following were among the cases examined:

Case IX.—John F——, twenty-nine years of age, intemperate, has been a boxer for ten years. Nine years ago he received a blow from "cross counter" upon left ear. The auricle became swollen, red, and tender, the pain extending all about the ear and down the neck. The tumor never opened, and became indurated in about one month. While the tumor remained "soft" it was repeatedly struck in boxing without other effect than slightly increasing the local sensitiveness. After recovery, which took place without treatment, constant bruising failed to produce a recurrence of the tumor. The outer surface of the left auricle is irregularly nodular—the fossæ being obliterated and the outlines of the ear completely destroyed, with the excep-

tion of the helix, which was not affected. The auricle is about three-fourths of an inch thick, and the concha is reduced in size, due to thickening of antitragus. The posterior surface is normal. The ear never discharged, and hearing is good.

CASE X.—Thomas A——, twenty-six years of age, has been a boxer for many years. Received a blow upon left ear from "cross counter" three years ago, producing a soft, tender swelling of the ear, and much pain in the organ and side of the head and down the neck. There was also a "numb" feeling and antophonia, which remains. Hot milk and slippery-elm poultices were applied. The tumor was at first purple in color, afterward it became red. It remained "soft" for a period of five months, during which time it was frequently ruptured by blows. Afterward it became hard and deformed. The auricle is smooth, all of the markings being obliterated except the anterior portion of the helix which is normal, and is fully one inch in thickness. The pinna seems folded upon itself from above downward. The concha is impinged upon from behind, leaving a mere slit in front of the meatus externus. There is some deafness in the left ear, due doubtlessly to the blow upon the organ. The resulting deformity is similar to that shown in Fig. 6.

In resorting to methods calculated to increase absorption, however, care must be exercised lest they increase unduly the local irritation. In relation to this matter the following paragraph is suggestive: "Physiologically the membrane of serous cavities secretes a serous fluid, which is taken up again by the vessels with great facility, this faculty of reabsorption is demonstrated by the rapid disappearance of injected fluids. But if the serous membrane is inflamed, the reabsorption of an injected fluid is impossible (Rindfleisch), and the irritation of the serous membrane determines an abundant secretion. Even a slight irritation is sufficient to transform a serous bursa into a cystic cavity. Such a transformation of a subcutaneous serous bursa is known as a *hygroma*, and may be called a tumor because of its tendency to persist indefinitely."[1] If extravasation in the beginning goes on rapidly, threatening to denude the cartilage more and more, or where reabsorption comes to a standstill, an aspirating needle may be inserted into its most dependent part and the fluid evacuated; the subsequent treatment should then consist in the methods already recommended. The evacuation of fluid may be repeated as often as the sac refills. The operation can usually be performed with the ordinary hypodermic syringe.

When the tumor is large and contains a considerable clot it is best to make an incision large enough to permit the contents, including the clot, to escape, and, since the tumor is almost sure to refill again, a silk seton may be passed through the opening thus made and brought out again above, to insure drainage. The wounds having a strong tendency to reunite should be kept open by occasionally drawing the seton through the tumor whilst pressing out the contents. As soon as the secretion lessens, its removal will be best accomplished by aspiration. It was formerly recommended to bring about adhesive inflammation by keeping up irritation with the seton, but this can be much better accomplished by massage.

When the above treatment is judiciously employed we may expect to witness a gradual diminution of the tumor and complete reabsorption of the fluid in three or four weeks; and, moreover, it is believed that much less disfigurement will ensue than occurs in cases allowed to run their course without such aid. The longer an actively progressing tumor is permitted to go on toward spontaneous rupture, the greater will be the separation of the perichondrium from the cartilage, and consequently the greater the ensuing deformity.

(To be continued.)

[1] Cornil and Ranviers: Pathological Histology, pp. 167, 168. Philadelphia, 1880.

Progress of Medical Science.

HEPATICA—A USELESS DRUG EXCEPT TO PATENT MEDICINE VENDORS.—Messrs. J. U. & C. G. Lloyd, of Cincinnati, have been investigating the subject of liverleaf. Of late years this drug has been extensively consumed in the preparation of certain proprietary medicines. From statistics collected by Messrs. Lloyd it appears that last year over 340,000 pounds were consumed, of which amount over 300,000 pounds were imported from Europe. Four years ago the entire consumption did not reach 10,000 pounds. Our native species are named anemone acutiloba, and anemone hepatica, and very closely resemble each other except in the shape of the leaves: the former has sharp lobes to the leaves; the latter blunt lobes. Our Pharmacopœia has recognized but one species—the round-lobed form. It is proven, however, by Messrs. Lloyd, that nine-tenths of the native drug of commerce is collected from the sharp-lobed species, which has never been officially recognized. The medical properties of hepatica are unimportant. The plant does not contain an active principle, and is as devoid of characteristics as is the grass of the field. Of the vast amount of the drug consumed, it is creditable that the medical profession uses but a small per cent. Almost the entire lot is employed in the preparation of certain secret remedies.—*Drugs and Medicines of North America* (Cincinnati), July, 1884.

BICARBONATE OF SODA IN THE TREATMENT OF TONSILLITIS.—In the early stages of tonsillitis, before the pain of swallowing is excessive, Dr. Giné Partagas claims that bicarbonate of soda will arrest the inflammation. He makes the application in the following manner: The index finger being moistened is charged with as thick a layer of the powder as will adhere to it, and is then introduced into the mouth and rubbed thoroughly over the inflamed tonsil. Five or six applications are thus made at intervals of five minutes, at the end of which, Dr. Partagas claims, the patient will find the act of swallowing nearly painless. When thus employed in the early stages, bicarbonate of soda will abort the disease, and later will promote resolution. In hypertrophy of the tonsils two or three applications of the powder each day will reduce the size of the gland very considerably in one or two months.—*Journal de Médecine et de Chirurgie Pratiques*, June, 1884.

COCAIN.—Dr. Aschenbrandt, of Würzburg, has made some experiments on the action of muriate of cocain on the human organism. He administered the drug, unknown to the subjects (who were soldiers), in doses of about one-sixth of a grain in cases of exhaustion and fatigue from various causes, and found invariably that the lassitude was speedily removed, and that the men could go on for hours without feeling either hunger or thirst. One of his experiments was made on himself after a sleepless night, with the prospect of a long day's march before him, when a dose of cocain (taken in coffee about 3 A.M.) enabled him to go the whole day without feeling hunger, thirst, or fatigue, and he dined late in the afternoon with his usual appetite. He considers the drug to be a direct nerve food, and not a stimulant merely; but its stimulating action is certainly far above that of alcohol, and it appears to have no injurious after-effects.

PAGET'S DISEASE OF THE NIPPLE.—Drs. Duhring and Wile regard Paget's disease as an abnormal proliferation and degeneration of the rete, with secondary destruction of the papillæ of the corium, and subsequent development of scirrhus cancer of the atrophying variety. The cancerous change originates in the epithelium of the smaller ducts, and advances from below upward and outward as far as the skin is concerned; later it attacks the gland structure; and the retraction of the nipple is an early sign of carcinomatous change.—*The American Journal of the Medical Sciences*, July, 1884.

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BABY-FARMING AS A FINE ART.

THE unique feature of a successful baby-farm, in contradistinction with all other institutions, is that the most conclusive test of merit is the small number of the graduates. This idea was aptly illustrated by a witty paragrapher on a Philadelphia paper, who imagined a lady with a burden in the form of a child going to a professional baby-farmer and negotiating for the child's board in the "home." In concluding the arrangements the lady said, "But what assurance can you give for the faithful discharge of your trust?" Proudly conscious of her peculiar abilities, the baby-farmer made reply, "Twenty-one deaths out of a possible twenty-three in the past six months." Needless to say, the new patron retired convinced she had made no mistake.

The subject no doubt is a sorry one to make a jest of, yet when the humorist strikes so true a key he may easily be pardoned for its unseemliness. Every one who has read of the exposures of baby-farming near this city must have noticed that the publication of the facts as to diet, attendance, surroundings, and large death-rate does not seem to lessen the number of children in the identical "boarding-houses" exposed. Under such circumstances it must naturally be presumed that the persons placing children out in this way do not desire the best, but do desire the worst, accommodations to be obtained. The patronage of these farms comes not from that portion of the community sometimes called the "lower" and "poorer" classes. In reality, the great majority of these unhappy infants are the offspring of well-to-do fathers or mothers, who, even with the heart-knowledge of their own immorality and crime, prate and expatiate upon the increase of crime and laxity of morals due to the leaven of foreign ideas in our body politic. An incident in illustration was given in *The Evening Telegram* one day quite recently. The reporter was going the rounds of the East Side with a sanitary inspector, and in one of the tenement-houses on Orchard Street came across this scene: "On the second-floor there was a poor half-starved child seated in a chair chewing a cracker. A man in the room above said the child was an adopted one. Every week an elegantly attired lady came to see it. He could tell no more than that, but he knew the child was of gentle birth. The doctor found the woman who had charge of the child, and gave her some medicine and a ticket to the Seaside Sanitarium."

One other gift has the baby-farmer who really understands her business that commends her to those desiring her services, and that is the complete obliteration of identity a child undergoes after becoming a boarder. This phase of the industry, it will be remembered, was brought out in the suit of Sivillar Berkely, claiming to be the wife of Forrest S. Downing, for the recovery of her child, who, she asserted, was in the care of a well-known baby-farmer. The evidence in this case was strong on both sides, but as might have been expected was against Miss Berkely. Perhaps under some conditions needless to mention but easy to infer the child might have been shown by testimony to have been other than Carlos Wilson or even Miss Berkely's. An undertaker during this trial testified that forty-five children were buried in coffins precisely alike and the circumstances of burial the same. These conditions surely give little opportunity for future recognition, and there are, and may be, many cases where some certain means of identification are needed, as in the case cited above.

Another model establishment is the one on One Hundred and Sixty-fourth Street, to which the daily newspapers have devoted some attention within the last two weeks. The proprietress of this farm no doubt by this time has a heart swelling with gratitude to the press for placing before the public the unexcelled advantages of the place she presides over. Then there is the "Children's Sanitarium" in New Jersey, near enough to New York to be of some interest. The devoted guardian of this charming retreat is the motherly Christian lady who believes it needless to obtain a permit for burial on the decease of a child. In this case, however, there is some hope of punishment, or Jersey justice will be belied.

Some of the baby-farmers must attain remarkable proficiency in their calling, if they pass through the long experience of the old lady seventy-six years of age, who applied for permission last week from the Brooklyn Health Commissioner to establish a baby-farm. She had been in the business thirty years, and as she was well recommended her desire was gratified.

Still, with the innumerable evils of the system so apparent, it is unjust to say that all the keepers of baby-farms are as heartless as they are pictured. Many, undoubtedly, are even more pitiless than they are painted. From the very nature of the business, the condition of birth, and the youth of the inmates, a large death-rate is to be expected, even in the establishments that have come under public notice. But when to these are added improper food, poor sanitary arrangements, lack of care and proper inspection, it becomes a frightful one. The whole aim of the typical baby-farmer is to make as much as possible with the least expenditure of time, labor, and money. Whenever the domestic economy of one of these places has light thrown upon it there is some show of an investigation. It subsides, however, and is only thought of when another instance comes up. When one of these inquiries is in progress the baby-farmer seeks to impress on the minds of all that she is endowed with every instinct a perfect mother should display toward her child. They give the hearer the same impression he would feel listening to *Madame Frochard* in the "Two Orphans," recounting her love and kindness for the blind girl *Louise*.

As long as society exists under its present conditions it is fair to suppose that baby-farming will be a fixture.

But if it must be conducted, it should be under a stern and rigid inspection, with no opportunity for the escape from punishment of those violating the provisions in regard to it.

SPECIAL DEPARTMENTS IN HOSPITALS.

We have received the first annual report of St. Mary's Hospital, Brooklyn. The report contains some facts that will have an interest to those concerned in hospital management and organization.

The medical and surgical staff numbers no less than thirty-four persons, not including the pathologist and curator. These gentlemen preside over eleven different departments, embracing gynecology, fractures and dislocations, genito-urinary surgery, diseases of the thorax, diseases of the abdominal viscera, obstetrics, neurology, diseases of children, and so on. Each department has its chief and two or three associates. In other words, the cases are divided up very much as is done in the city dispensaries, instead of having simply a medical and surgical service. This decidedly novel plan has now been practically tried for a year, there having been 617 patients treated during the time. Regarding its workings, we cannot do better than quote the words of the report:

"Whatever forebodings, as to the practicability of such an arrangement, may have existed at the outset, and while some without due reflection viewed this new departure with doubt or disfavor, and not a few predicted non-cohesive disaster, the results as set forth in this first annual report will, it is hoped, clearly prove not only its practicability, but that a high degree of co-operative efficiency in the professional service has been effected. The history of each patient on entering the hospital is carefully recorded, and he or she assigned to the appropriate department, after which the head or chief of such department assumes his or her care and treatment, and becomes responsible and, in a measure, accountable to the entire faculty as a supervisory body. In this manner not only is the professional work better and more orderly conducted, and the patient, doubtless, the gainer, but the most perfect harmony exists, and each member of the hospital staff finds his intercourse and association with his colleagues both pleasant and profitable."

Certainly one year's experiment does not settle the question of the real wisdom of this new plan. It will be interesting to study its workings, however, in connection with the entirely opposite method pursued by certain hospitals in this city; as for example Roosevelt, where there is but a single chief surgeon for the whole surgical service.

But it may be inquired now whether the Brooklyn plan is not more just to the patient and physician, and equally fruitful in scientific results.

CONCERNING COMMITMENT TO INSANE ASYLUMS.

The lunacy laws of most communities need overhauling in order to provide proper security against the incarceration in asylums of persons who are not in fact insane. This is true in this country, for there have been within a few years several remarkable instances of unjust commitment through the cupidity or hatred of relatives. The same is true also of England, as will appear from the following statement of a recent litigation, which we take from one of the legal journals: A case of unusual importance is that of Weldon *v.* Winslow, recently tried in the Queen's Bench Division of the English Court, and in which the judgment has been reversed by the full Bench. The action was against Dr. Forbes Winslow, the alienist; it was brought by Mrs. Weldon, whom Dr. Winslow had advised was a proper subject for restraint in an asylum, and whose husband he had aided in endeavoring to put her under such restraint.

The action was for assault and also for libel—the assault being the attempted restraint, the libel being his letter to the husband saying that immediate steps to secure her should be taken; meaning thereby, as plaintiff alleged, that such steps must be taken to put her in confinement as a lunatic.

The doctor relied for his defence as to the assault on an order made on certificates under lunacy statutes; and as to the libel, upon his privilege, as a physician, to write such a letter without malice and in discharge of his duty. Mr. Justice Manisty, in a lengthy opinion, in which Justice Williams concurred, and which will probably soon appear in the current reports, condemned the course of the defendant, who was the proprietor or manager of the asylum to which it was proposed to take plaintiff, for having taken any part in the arrangements for procuring the physicians' certificate, and also criticised the conduct of the physicians, who, instead of making two separate and independent examinations, went together to see her, and, after having an interview together with her, took turns in stepping out, that each might make, what they called, a separate and independent examination.

The Court held that the fact that those steps were taken in pursuance of the plan of sending the plaintiff to an asylum of which the defendant was the proprietor, where he would receive compensation for receiving her, was sufficient evidence of improper motive to require the submission of the case to a jury, and that the Judge at the trial erred in assuming that Dr. Winslow would not be actuated by sordid motives, and dismissing the action for want of evidence to show any improper motive.

The Court evidently appreciated the eccentricity of the plaintiff, for they said that the great difficulty in the argument of the case had been to get at the facts, for the plaintiff, both at the trial and on the argument in the appellate Court, conducted her own case.

But they rightly said that it is not every mere harmless delusion of eccentricity which requires a person to be confined in an asylum.

Few professional positions are more difficult and delicate than those in which a lawyer or physician stands when called upon to advise upon a question of this kind, and to take the necessary steps to secure commitment. The only safe and right course is for those concerned to consult either a medical man, or, better still, a competent lawyer conversant with such subjects; in either case selecting one who has nothing to do with the asylum to which it is contemplated to commit the subject, and to separate entirely the matter of application for commitment from any connection with the subsequent custody and management. The convenience and saving of time effected by relying on the aid of the physician of an asylum for securing commitment, is not worth purchasing at the cost of the mischief which may be involved.

LEPROSY, AND ITS DANGERS.

Good results may follow evil methods, and whether Dr. O'Donnell be a charlatan and an alarmist or not, he has excited interest in a subject that deserves the attention of the American people.

Leprosy is not a disease of which those who are cleanly and chaste need ever have any fear; but as a large number of American citizens possess neither of these virtues, it is well that they provide against the contingency of elephantiasis græcorum. For there is little doubt that leprosy is contagious, just as syphilis is contagious, *i.e.*, through the agency of the secretions and blood. Among licentious people it may spread with rapidity. The influence of heredity is also potent in increasing the number of victims. Lepers reproduce lepers, though fortunately the second generation dies before it can be productive.

The contagion of leprosy, according to Dr. George Thin, lies unquestionably in the *bacillus lepræ*, first discovered by Hansen. This bacillus resembles very closely that of tuberculosis. Its habitat is the lymph or white blood-corpuscle, which it changes into the leprous cell. It makes of this an irritative body, producing the peculiar exudations and low grade inflammatory conditions characteristic of the disease.

The parasitic theory of leprosy is an interesting one, and, if true, would throw a new light upon methods of prophylaxis and treatment. It is difficult, however, to explain satisfactorily by this theory the facts of hereditary transmission of the disease, and especially such a one as is given by Dr. A. W. Saxe. That writer says: The healthy wife of a leper gave birth to a leprous child. Her husband died. The still healthy widow married a healthy man, and gave birth again to a leprous child.

As regards China and leprosy, it is to be borne in mind that, if we are to legislate against the disease, we must not single out China. Leprosy exists also in Mexico, the West Indies, India, Norway, Sweden, New Brunswick, Australia, the Sandwich Islands, Eastern Africa—in fact, on the sea-coast in nearly all tropical regions.

In India there are said to be over 100,000 lepers; the number in China is unknown, but is unquestionably great. The Hawaiians, of all people, are most scourged by it, nearly one-tenth of the population being affected.

Four years ago there were between fifty and one hundred lepers in the United States. Whether this number has increased we cannot say. One thing is certain, however, that the disease cannot be spread by the simple exhibition of cases of leprosy before the public. However bad the taste or useless and sensational the object of such a performance, it would be as innocent to public health as the exhibition of a like number of cases of syphilis.

The citizens of New York who have been so worried over the possible introduction of leprosy into this city, should be informed that for years there have been one or more lepers in the city hospitals, one even having served for a time as a nurse in Bellevue Hospital.

While leprosy is a disease about which much is unknown, there are certain facts that are tolerably well established. These have been formulated by Dr. A. W. Saxe ("Report on Hawaiian Leprosy") as follows:

"1. Leprosy is not a form of syphilis.

"2. It is a specific and well-marked disease.

"3. There are two varieties—the *tubercular* and *anæsthetic* [some add a third, the *macular*].

"4. These varieties may be distinct or associated.

"5. It is more common in males than females.

"6. It is hereditary.

"7. It is contagious.

"8. It is incurable.

"9. Europeans are to a certain extent exempt from the disease, probably from greater precautions in avoiding the contagion.

"10. The causes of the disease are unknown.

"Finally, leprosy disappears with improved hygienic conditions of a people, cultivation of the soil, and absolute isolation of all lepers."

In some cases, we would add, the disease seems to disappear despite the most favorable conditions for its propagation, as has been noted in the Virgin Islands by Dr. Bonn.

THE PROGRESS OF THE CHOLERA.

The reports from the cholera-infected districts show, at date of writing, that the disease is unquestionably decreasing at Marseilles, Toulon, and Arles. On August 3d, for the first time since the epidemic began, no deaths from cholera at Toulon were reported. The number of deaths daily in that city has fallen to an average of three or four, while the cases in the hospitals number about one hundred.

At Marseilles the daily death-rate has varied between seven and twenty-eight. The number of new cases has gradually fallen.

On the other hand, a few cases of cholera have occurred at various places in the neighborhood of the stricken cities, and in several cities and towns in Italy. A case of cholera is also reported to have occurred at Geneva, Switzerland.

The *New York Times* has continued to publish excellent cable reports of the cholera's progress. Consul Mason, of Marseilles, has also given an interesting account of the development of the epidemic. This gentleman writes:

"The present situation may be, therefore, summarized as follows: The epidemic which now prevails at Marseilles and Toulon is Asiatic cholera, imported, beyond all reasonable doubt, from Saigon, China, by the French transport Sarthe, to the port of Toulon. At first the disease was of the type medically classified as 'benign,' but its malignity has since increased by its further diffusion and development under the influence of continued hot weather. At Toulon the epidemic has spread in some degree to neighboring villages, and from Marseilles it has penetrated as far toward the interior as Aix, in Provence. The sea-going commerce of Marseilles is for the time almost entirely suspended. Italy, Spain, Tunis, and Algeria, impose quarantines of from seven to fifteen days upon all vessels from these two infected ports. Ottoman ports absolutely refuse entry to such vessels upon any and all conditions. A strict quarantine of seven days has been established on the land frontiers of Italy and Spain against all persons coming from France; and the conditions of these frontier quarantines

in respect to baggage and merchandise are daily becoming more rigid and exacting. Under these hopeless conditions, nearly all the steamship lines between Marseilles and other Mediterranean and Eastern ports have suspended operations. and have, or will soon, close their offices in Marseilles. On the French island of Corsica no vessel from Toulon or Marseilles is permitted to land passengers, baggage, or merchandise. In Lyons, and at the Paris terminus of the Paris, Lyons, and Mediterranean Railway, all passengers, baggage, and freights, as well as cars coming from Marseilles, are fumigated, disinfected, and subjected to the strictest surveillance."

News of the Week.

Chairs of Hygiene have recently been established at the Universities of Prague and Gratz.

Willard Insane Asylum.—Dr. P. M. Wise has been appointed Superintendent of the Willard Insane Asylum, in place of Dr. Chapin.

A Diagnosis.—"Congestion of the right kidney" is the diagnosis made by his attending physician of an indisposition from which Rev. Henry Ward Beecher has been suffering.

Legislating about Cholera.—M. Paul Bert has proposed in the French Chamber a law which compels every doctor to report without delay the appearance of a case of cholera.

Not in Favor of Women.—The University of Heidelberg has been offered the sum of 100,000 marks on condition that it would admit women to its courses. The offer was refused.

The Summer Sanitary Corps.—During the week ending July 26th the summer corps of physicians visited 5,328 houses and 25,536 families, treated 945 patients, and distributed 2,520 circulars and 1,085 free excursion tickets. Of the diseases treated 463 were diarrhœal, 126 of lungs and throat, and 59 contagious.

Suicide on Account of Headache.—One often hears patients declaring that they will kill themselves if the pains from which they suffer continue. Suicide, simply on account of physical pain, is, however, rare. Recently such a case was reported, the victim having apparently suffered from brain tumor. Only last week we referred to the case of an epileptic who shot himself, because of his incurable affliction.

Cholera and the Migration of Birds.—A cable dispatch says: The fact that the swallows, which migrated from Marseilles at the outbreak of the pestilence, have not yet returned, and that there are no sparrows at all in the city, is adduced as evidence that the atmosphere is still vitiated. This migration of the birds has made a deep impression upon the public mind, and has led to a demand for a purification of the atmosphere by means of bonfires.

A New Treatment for Ulcer of the Stomach.—M. Debove proposes to treat gastric ulcer by practically annulling the function of the stomach. He gives the patient the following dose three times daily: Poudre de viande, 25 grammes; bicarbonate sodæ, 10 grammes. He gives this generally by the syphon tube. In addition he lets the patient drink a litre of milk daily. It is believed that the alkalinized food passes through into the intestines without exciting gastric action.

A New Medical College in the District of Columbia has been organized with the following Faculty: Dr. John T. Winter, Professor of Materia Medica; Dr. Howard H. Barker, Professor of Obstetrics and Dean of the Faculty; Dr. T. E. McArdle, Professor of Surgery; Dr. Samuel F. Adams, Professor of Theory and Practice of Medicine; Dr. G. W. Cook, Professor of Physiology; Dr. G. William West, Professor of Anatomy. The new college is to be called the Medical Department of the "National University."

Static Electricity as a Preventive of Cholera.—Professor R. Vigouroux contributes to *Le Progrès Médical* an article upon the above subject. He refers to the experiments of Boillot, Angus Smith, and Chappuis, which prove the great disinfectant properties of ozone. He then shows that by the static electrical bath upon the insulated stool ozone is disengaged most perfectly and effectively. The electrical bath gives also a stimulus to nutrition which is of importance. Vigouroux concludes that a daily electrical bath on the insulated stool is the best prophylactic against cholera.

An Office Thief.—Dr. A. H. Friedenberg, of this city, writes: "Will you kindly allow space in your journal to warn your readers against another office thief. He is of medium height, slender, blonde, with a smooth face and but a small blonde mustache; he is a German, speaking English fluently, but with a slight accent, well dressed and genteel-looking, and about nineteen or twenty years of age. He follows the same methods as his predecessors in his specialty. He must wait for the doctor, or if that is denied him, he sends the servant on some errand, while he waits in the hall." He managed to steal a microscope from our correspondent.

Ammonia as a Prophylactic against Cholera.—Dr. S. W. Ingraham, of Chicago, writes: "During the years 1865 and 1866 I spent much of my time in New York City, and as the cholera was quite epidemic there during those two years I took occasion to ascertain what class of people were least subject to it. I found that the men who worked in horse stables were rarely, if ever, attacked with the disease, and that their families were less liable to the contagion than persons of other occupations living in the same localities, with the endemic influences nearly or quite equal. Upon special examination I found the clothes and even the skin saturated with ammonia to such an extent that when they came in close proximity to me I could plainly discern its odoriferous properties. From this I was led to believe that their whole bodies were more or less under the influence of the ammonia, and that the cholera contagion would not attach to them."

Doctors and Sanitation.—The following will be read with interest, as it shows, if we mistake not, that it is the plumbers and architects who have been the real sanitary reformers! Says *The Sanitary News*: "The great fault of all medical journals and practitioners lies in this fact, which *The Sanitary News* has often endeavored to point out to their near-sighted or averted gaze, namely, that the most efficient and reasonable sanitary work is accom-

plished by men outside the medical profession. The really useful and valuable sanitary work which conserves the public health is done by these same 'perpetrating' architects and by plumbers, when they design and execute those measures which cheat the physician out of his bill by preventing the causation of disease by defective drainage, etc. What have the medical gentlemen accomplished in their own branch of sanitary work? Have they been able positively to prevent one single disease?" Will not our excellent contemporary the *News* now publish some letters from "A Plumber to a Young Doctor," for example, telling him how to avoid typhoid fever, cholera, small-pox, etc.?

The Waste of the Medical Profession, that is to say the number of annual losses by death and otherwise in Great Britain and Ireland is, according to Sir Lyon Playfair, about 1,600. The *Lancet* denies this and says that the number of deaths annually among the twenty odd thousand British doctors is only about 525, while the number newly registered is over a thousand annually. Applying the same death ratio to the United States the annual loss by death should be between 1,500 and 2,000. The annual additions to the medical ranks, judged by the number of students graduated annually, is over three thousand.

An English Cholera Commission.—The English Government has at last appointed a Commission, consist- of Dr. Klein, F.R.S., and Dr. Heneage Gibbes, to proceed to India and study the cholera. They are expected to act in conjunction with an Indian Cholera Commission also recently appointed. It is gratifying to learn that two such well-qualified gentlemen have been appointed for this important work. Still, although there is a broad field for investigation, one cannot but think that the English Government has been very laggard in appointing the Commission, and that its action now reminds one of locking the stable-door after the horse is stolen.

Scientific Investigation into Cholera.—The physicians of Marseilles have been experimenting with a number of old remedies for cholera, and, as might be expected, with little success. Inhalations of oxygen (and ozone?) seem to relieve dyspnœa somewhat. Intravenous injections of saline solutions have done no permanent good. A Professor Reitsch, heretofore unknown to the scientific world, claims to have accomplished some extraordinary results. He has, he says, successfully inoculated dogs with the cholera bacilli. A correspondent of the *Times* takes the trouble to telegraph across the Atlantic that Professor Reitsch has also discovered a way of studying the cholera microbe alive under the microscope! It is needless to say that this in one of the first things that the discoverer of this microbe himself performed. The same wonderful Professor has discovered an infallible way of determining the severity of an attack in any case by an examination of the dejections. This method he (naturally) keeps secret. We suspect that Professor Reitsch is a humbug, or else is greatly misrepresented by cable.

Cholera and the Temperature.—Simultaneously with the appearance of the first two virulent cases of Asiatic cholera at Marseilles, there began a period of intense sultry heat, which, with the exception of one day, continued till the last of July. On the evening of June 28th, this stifling heat was accompanied by dense swarms of mosquitoes which settled upon the lower part of the city, and were only driven off by fires of pitch and resin, which were lighted along the streets during the night. It is remembered that a similar visitation, accompanied by a similarly dead, stifling atmosphere, had marked the beginning of the great epidemic of 1865, and this circumstance, added to the steady increase of the disease at both Toulon and Marseilles, produced a panic which continued several days. During this period many thousands of people removed to suburban residences or the interior.

The Doctors and the People of the Infected Cholera Districts.—There is no doubt much exaggeration in the dispatches regarding the relations of the people to the doctors in the cholera districts.

One report says: The lower classes dislike and oppose the physicians because they have gotten the notion that the physicians have been instructed to help the cholera along in order to get rid of the surplus population. A paper read by a physician in Berlin lauding the cholera as sweeping off beings unfitted for the struggle of existence, has been widely reproduced in France, and has helped to prejudice the people against the doctors and to confirm them in their belief that the government has adopted views similar to those of the Berlin essayist. An instance of the popular hostility toward the physicians occurred in Marseilles, July 30th. A doctor was going into the slums to attend a patient, when he was confronted by a party of the sick man's neighbors, armed with knives, who chased him away and prevented his ministering to the sufferer.

On the other hand the Municipal Council of Marseilles has resolved to erect, in a prominent place, a tablet to commemorate the noble self-sacrifice of the doctors and Sisters of Charity who were victims of the epidemic. Dr. Patras, who died July 31st, will have a street named after him.

THE SIMS MEMORIAL FUND.

To the Medical Profession and Others throughout the World:

The great achievements of Dr. J. Marion Sims call for some more lasting testimonial than obituaries and eulogies. To him medical science is indebted for much brilliant and original work, especially in gynecological surgery. Those who have been benefited by his teachings and new operations, and such as have had the direct advantage of his personal skill are among the first to recognize and acknowledge this debt.

To him is due the honor of giving the first strong impulse to the study of gynecological surgery in America.

It is believed that the medical profession everywhere, the vast number of women who owe their relief from suffering directly to him, and those who realize the benefits he first made possible, will gladly unite thus to honor the man through whose original and inventive genius such blessings have been conferred upon humanity.

At the suggestion of many friends, therefore, the subjoined committee has been organized, and it is proposed that a suitable monument be erected to his memory in the city of New York.

To this end the active co-operation of the medical profession and the many other friends of Dr. Sims throughout the world is respectfully solicited. Contribu-

tions of one dollar and upward may be forwarded to the journal which has been constituted the treasury of this fund—THE MEDICAL RECORD, New York.

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E. L. B. Godfrey, M.D., " "	1 00
Juan B. Gross, M.D., " "	1 00

Reports of Societies.

British Medical Association.

FIFTY-SECOND ANNUAL MEETING,

Held in Belfast, Ireland, Tuesday, Wednesday, Thursday, and Friday, July 29, 30, 31, *and August* 1, 1884.

(BY CABLE TO THE MEDICAL RECORD.)

(Concluded from page 132.)

THURSDAY, JULY 31ST—THIRD DAY.

THE Council met from 9.30 A.M. to 11 A.M. when the General Session was called to order by the President.

THE ADDRESS IN PHYSIOLOGY

was then delivered by PETER REDFERN, M.D. (*vide* page 113). This was listened to with marked attention by a large audience. At the conclusion a vote of thanks was tendered the orator.

THE REPORT OF THE MEDICAL REFORM COMMITTEE

was next presented, and after some discussion was adopted.

THE MEDICAL ACT AMENDMENT BILL

was brought up and discussed by Drs. Waters, Stokes, Brown, O'Connor, and others. The general sentiment was against such amendments as has been made by those really opposed to the measure. The ostensible intention of the latter parties was to thus impede its passage. The main objects of the bill are the adequate representation of the profession in the Council, the provision for an uniform qualification for the *Register* and the maintenance of safeguards against the assumption of illegal professional titles. This bill was finally endorsed.

After the transaction of some miscellaneous business the Association then adjourned until Friday.

FRIDAY, AUGUST 1ST—FOURTH DAY.

The meeting was called to order at 10 A.M., when the

ADDRESS IN OBSTETRIC MEDICINE

was delivered by DR. GEO. H. KIDD (see p. 141).

At the 2 P.M. session the Reform Committee's report was reconsidered and again presented, and the points therein discussed by various speakers.

The reports of the various committees were then presented and adopted, after which the Association adjourned.

REPORTS OF SECTIONS.

SECTION ON SURGERY.

THURSDAY, JULY 31ST—THIRD DAY.

The Section was called to order at 2 P.M. by the President, SIR WM. MCCORMAC.

No address on surgery was delivered.

TRANSPORT SPLINT.

MR. JOHN FAGAN demonstrated his transport splint, and also exhibited some cases upon which excision of the knee had been performed.

NEW ELASTIC TOURNIQUET.

DR. J. WARD COUSINS showed a new elastic tourniquet and explained his mode of application as well as its adaptability to a large range of cases. Its principal claims were simplicity and efficiency.

SECTION ON PUBLIC MEDICINE.

THURSDAY, JULY 31ST—THIRD DAY.

The Section was called to order by THE PRESIDENT, who delivered his address, taking for his subject the

GENERAL CHARACTER OF EPIDEMICS.

In the course of his remarks he referred to the prevalence of cholera on the Continent, and urged due vigilance on the part of the profession and Government of Great Britain against the invasion. Nothing was of more importance than the purification of the drinking-water, attention to perfect sewerage, and the free use of disinfectants. In fact, the purer the water of a district the lower was the death-rate. The labors of Pasteur, Budd, and Koch were appropriately referred to and eulogized.

SECTION ON MEDICINE.

THURSDAY, JULY 31ST—THIRD DAY.

The chair was occupied by the President, DR. J. W. T. SMITH, of Belfast.

THE CAUSATIVE RELATIONS OF PHTHISIS,

was introduced by DR. DOUGLAS POWELL. His line of argument was against the contagiousness of the disease.

DR. J. WARD COUSINS disputed such an assumption, and exhibited an antiseptic inhaler, which he claimed to be efficacious in killing the infecting bacilli.

PROFESSOR GARDINER spoke in support of Koch's views in regard to contagion.

DR. DYCE DUCKWORTH presented the subject of "Rheumatoid Arthritis."

SECTION ON PHARMACOLOGY AND THEURAPEUTICS.

DR. SHOEMAKER, of Philadelphia, presented the subject of

OLEATES,

and urged a further investigation into their nature and action.

SECTION ON OBSTETRIC MEDICINE.

WEDNESDAY, JULY 30TH—SECOND DAY.

THE PRESIDENT of the Section, after calling the meeting to order, delivered an address in which he defended the rights of obstetric men to operate, contending in that connection that no men could be competent gynecologists who were not surgically inclined.

Saturday was occupied in excursions to Giant's Causeway, Garron Tower, Newcastle, and other points of interest.

About six hundred members were present at the meeting.

THE AMERICAN OPHTHALMOLOGICAL SOCIETY.

Twentieth Annual Meeting, held July 16th and 17th, at the Grand Hotel, Catskill Mountains, N. Y.

FIRST DAY—WEDNESDAY, JULY 16TH—MORNING SESSION.

In the absence of the President, DR. W. F. NORRIS, of Philadelphia, presided.

Dr. O. F. Wadsworth, of Boston, was elected to fill the vacancy caused by the resignation of Dr. Richard H. Derby, Secretary and Treasurer.

The first paper was entitled

IRIDECTOMY IN CHRONIC IRITIS,

by DR. HASKET DERBY, of Boston.

A case in which frequent attacks of iritis had occurred was described. The patient had obtained relief from the use of atropine. She finally passed into the hands of another surgeon who diagnosed glaucoma and performed iridectomy. After this the attacks of iritis became less frequent. The doctor, however, thought that the improvement was to be attributed more to the natural tendency of the disease to wear itself out than to any good effects of the operation, and concluded that under these circumstances an operation was not justifiable.

DR. H. KNAPP, of New York, stated that in many instances recurrent iritis stops spontaneously. He would restrict the operation of iridectomy to those cases in which with the iritis there is a tendency to cyclitis and glaucoma. In genuine iritis he does not recommend the operation.

DR. CHARLES S. BULL, of New York, read a paper entitled,

CASES OF RESTORATION OF THE EYELID BY TRANSPLANTATION OF FLAP WITHOUT A PEDICLE BY WOLFE'S METHOD.

Two cases were reported in which the upper lid was the one operated on, the flap being taken from the front of the fore-arm, and after being deprived of all subcutaneous tissue, being placed on the denuded lid, and, when necessary, held in position with sutures. The dressing consisted of gold-beaters' skin, with iodoform gauze, borated cotton, and a bandage. This dressing was left undisturbed for three or four days. After this the dressing was repeated every day, or every other day.

In the third case the lower lid was operated on, the flap being taken from the anterior surface of the chest. In those cases in which sutures were applied, there was a little suppuration at their seat, but in all the cases a satisfactory result was obtained.

DR. B. E. FRYER, U. S. Army, then reported

A SUCCESSFUL CASE OF SKIN TRANSPLANTATION WITHOUT A PEDICLE TO THE LOWER LID AFTER REMOVAL OF AN EPITHELIOMA.

In this case, after removal of the epithelioma by excision, a flap was taken from the fore-arm and applied to the raw surface of the upper lid. No sutures were applied, but the flap was held in position with gold-beaters' skin plaster. Two layers of this were applied and allowed to dry. It was then found that they kept the edges of the wound in perfect apposition. The lids were stitched together with fine silk sutures. As the patient in returning to her home would be exposed to cold, a pad of absorbent cotton was applied to protect the part. This was removed on the arrival of the patient at her home. On the eighth day the plaster was removed, and perfect union found to have occurred. Three months after the operation there had been but slight contraction. The doctor laid particular stress on this method of dressing these wounds. If the operation were done at the patient's house he would dispense with the pad of cotton.

CASE OF GANGRENE OF THE LID WITH SUBSEQUENT RESTORATION OF TISSUE WITHOUT A PLASTIC OPERATION.

DR. RICHARD H. DERBY, of New York, reported a case which, when first seen, was found to have marked gangrene of the lower lid. The case then passed from observation, and was not seen for four weeks. When he returned, it was found that the skin had restored itself and that there was very little deformity.

The discussion of these papers was entered into by Drs. Pooley, Prout, Harlan, Little, Howe, Andrews, Lippincott, Fryer, Green, and Wadsworth.

HYSTERICAL MONOCULAR BLINDNESS, WITH MYDRIASIS AND BLEPHAROSPASM,

was the title of a paper read by DR. GEORGE C. HARLAN, of Philadelphia.

A case of monocular blindness was described, in which it was accidentally discovered that the blindness, as well as the spasm of the face which was present, was much benefited by the application of a Charcot magnet. A piece of wood made to imitate the real magnet was prepared, and with this the same results were obtained The patient afterward presented herself with an hysterical affection of the elbow-joint, which was also relieved by the imitation magnet.

DR. H. KNAPP, of New York, read a paper entitled

NEURO-RETINITIS WITH FULMINANT BLINDNESS.

CASE I.—An apparently healthy man, after a day of severe headache went to bed and slept well, but the following morning on awakening found that he could see with neither eye. In the absence of any other adequate explanation, the blindness was attributed to uræmia. Examination of the urine, however, failed to reveal any abnormality. The diagnosis of uræmic blindness was concurred in by a number of prominent physicians. Examination of the eye showed well-marked choked disks. The treatment consisted in the induction of perspiration with salicylate of sodium, and the subsequent use of iodide of potassium and calomel. After the lapse of some time, the islet of retinal tissue regained its functional activity, and the man could see objects held in a certain position, provided they were not brought too close to the eye. He could thus read Snellen 50, and could correctly indicate the names of playing-cards. The doctor thought that the attack might be attributable to some abnormity about the frontal lobes of the brain in the region of the chiasm.

CASE II.—A girl eleven years of age had had spells of loss of vision for a few days, after which she awoke one morning to find herself blind in the left eye. The right also became blind in the course of the same day. The urine was normal. Salicylate of sodium and calomel were given. This was followed by profuse diarrhœa. Two days later there was light perception, and steady improvement set in from this time. Two months later the eye-sight was completely restored. It was thought that there might be something causing pressure in the neighborhood of the optic chiasm or cavernous plexus. If there were such a condition the diarrhœa which was induced would be of benefit.

DR. CHARLES KIPP, of Newark, N. J., referred to a case of choked disk which he had had under observation for fifteen years and in which no symptoms of brain or other trouble had been observed. He thought that probably in some instances optic neuritis was due to other than cerebral lesions.

DR. H. KNAPP called attention to the fact that disease of the frontal lobes might exist for a long time without producing alarming symptoms.

DR. GEORGE C. HARLAN, of Philadelphia, stated that he had examined a number of patients in blind asylums, with atrophy of the optic nerve, without finding any evidences of serious disease.

Dr. A. Alt, of St. Louis, had seen a case of neuro-retinitis with large hemorrhage, which was thought to be due to a tumor of the brain and with marked impairment of the general health. Under the use of iodide of potassium the health was restored. There is, however, atrophy of both optic nerves.

Dr. W. F. Norris, of Philadelphia, read a paper on

HEREDITARY ATROPHY OF THE OPTIC NERVE.

In a family of twenty-three persons which had been examined by Dr. Norris, fourteen were found to have congenital atrophy of the optic nerve. Bichloride of mercury and strychnia were administered, but in only one case did improvement ensue.

Dr. Norris also reported

TWO CASES OF ORBITAL TUMOR.

The first case was one of myxo-sarcoma of the orbit occurring in a child four months old. The tumor was twice removed, but returned after both operations. In the second case, the tumor was an osteoma, which appeared in a woman thirty-two years of age. The growth involved so much of the orbit, that it became necessary to remove the eye. This eye had been blind for some time. The tumor was chiselled away. There has been no return of the disease.

Dr. J. A. Andrews, of New York, read a paper on

JEQUIRITY.

He objected to the plan usually followed in the use of this drug. His method is to employ a one per cent. fresh solution, which is brushed over the eye once. The eye is examined after twenty-four hours and the application repeated, if necessary. In this way he has had good results with no accidents.

Dr. Norris had observed that the conjunctiva seems to lose its susceptibility to the action of the drug after frequent applications.

Dr. H. S. Schell had used preparations which had been preserved for weeks by the addition of four grains of boracic acid to each ounce of the infusion.

Dr. Wadsworth had preserved the infusion active and free from bacilli with the addition of two per cent. of carbolic acid.

Dr. J. S. Prout stated that he had used quinine a number of years ago in the class of cases for which jequirity was recommended. It had produced very satisfactory results.

Adjourned.

AFTERNOON SESSION.

The Society again met at 4 P.M., to examine a number of microscopical specimens prepared by Dr. A. Alt, of St. Louis, and to witness the demonstration of a new form of perimeter by Dr. E. Dyer, of Newport.

EVENING SESSION.

The Society was called to order at eight o'clock.

The first paper was read by Dr. H. S. Schell, of Philadelphia, on

EMBOLISM OF THE CENTRAL ARTERY OF THE RETINA.

An old lady suddenly lost vision in the left eye. There was found to be on examination insufficiency of the mitral valve and hypertrophy of the left ventricle. Special attention was called to the fact that after massage of the eyeball a current was induced in the vessels, but this current, instead of being continuous, was broken into segments. No benefit followed treatment.

Dr. A. Mathewson, of Brooklyn, then read a paper on

THE NATURAL HISTORY OF CATARACT.

A man who had suffered from cataract for some years suddenly regained vision. An examination of the eye showed that the lens had disappeared, and it was afterward found in the lower part of the vitreous. Two years later a severe attack of glaucomatous inflammation required the removal of the eye. The lens was found to be extremely small.

Other members reported cases of a similar character.

Dr. W. W. Seely, of Cincinnati, described his experiences in certain refractive cases, alluding particularly to lack of balance of the ocular muscle and its relation to refractive changes. He thought that if all cases of so-called mixed astigmatism were examined after paralysis of the accommodation, many of them would be found to be examples of simple hypermetropic astigmatism. A number of illustrative cases were cited.

Dr. L. Webster Fox presented a paper on

THE CLINICAL HISTORY OF A CASE OF SYMPATHETIC OPHTHALMIA.

A boy received a punctured wound near the cornea of the left eye. It was treated with cold applications and little inflammation ensued. Later, however, dimness of vision manifested itself in the right eye. At this time there was barely light perception in the eye. Vigorous treatment was instituted, but did not abort the inflammation. Later, iodide of potassium and mercury were administered, but with no benefit. A recent examination showed the right eye atrophied to half its normal size, with no perception of light, and the left eye, becoming atrophied, light-perception doubtful.

Dr. J. A. Lippincott, of Pittsburg, Pa., read a paper entitled

TWO CASES OF ORBITAL ABSCESS.

The first case occurred in the latter part of 1877 in a child of feeble powers of resistance, and the abscess followed an attack of erysipelas of the face and scalp. A small abscess of the right upper eyelid developed, which was opened and a poultice applied. Six days later the eyeball began to protrude rapidly and the pain and general symptoms became more marked. The ball protruded more than half an inch. Diplopia was observed and the sight appeared to be unimpaired.

An exploratory incision was made under ether, and pus being found a free incision was made, allowing the escape of a quantity of pus. It was decided to not insert a tent, but a poultice was applied, pressure made, and a supporting treatment instituted. Under this treatment the patient improved, and the protrusion became less marked. Two days after the operation on the right eye it became necessary to open an abscess behind the left ball. This rapidly healed without further treatment. An examination made a short time ago showed very slight protrusion of the right eye. $V = \frac{20}{XX}$.

Case II.—A. R——, scarcely twelve months old, was seen in the latter part of 1880. Swelling and chemosis of the lids had appeared three weeks previously. There was no protrusion of the ball until a few days before she was seen by Dr. Lippincott. At that time the ball protruded to the extent of its diameter, the pupil was of natural size and irresponsive. The pain did not seem to be severe and there was only slight fever.

An aspirating needle was introduced above the globe and an abscess containing fetid pus was found; this was evacuated and a poultice applied. Improvement of the general condition at once began, but one week later the opening closed, and as there evidently was pus still behind the globe, a second opening was made, and at this time healthy pus escaped. Pus continued to flow for two weeks when the opening closed. The child continued to improve, and a recent examination showed very little protrusion of the ball, considerable swelling of the lids, and partial ptosis. The eyeball is freely movable. The disk shows decided white atrophy, and the vessels of the retina are contracted. Vision is limited to light-perception.

Dr. Samuel Theobald, of Baltimore, described a case of this nature, which he had recently seen occurring

in a man run down from over-work. Four days after the beginning of the symptoms deep fluctuation was felt, and the abscess was opened. Poultices were then applied. Two days later it was found necessary to evacuate a collection of pus which had formed beneath the ball. Perfect recovery followed, the vision being restored, and the mobility being normal.

Dr. Charles J. Kipp, of Newark, read a paper on

ABSCESS OF THE FRONTAL SINUS, ETHMOID CELLS, AND SPHENOIDAL SINUS.

J. B——, aged fifty-four, had suffered for many years from headache. The left eye was slightly protruding, and a tumor was seen involving the upper part of the orbit. Sarcoma was diagnosed, but a few days later, in attempting to remove it, the swelling broke, and a large quantity of pus escaped. A drainage-tube was introduced. Shortly after the operation the patient had pneumonia, from which he died. After death it was found that the frontal sinus, the ethmoidal cells, and sphenoidal sinus had been converted into one large pus cavity, from the walls of which numerous spicules of bone projected.

Dr. Kipp also reported a case of distention of the frontal sinus. A woman, aged fifty-seven, presented a painful tumor below the left eyebrow. She had suffered from naso-pharyngeal catarrh for a number of years. On pressure, fluctuation could be discovered. An operation was declined. The case was seen one year later, at which time the sac accidentally ruptured, and the contents escaped into the nose. The cyst continued to refill for some time, but after some months the discharge diminished, and at the present time the sac seldom becomes distended. The treatment consisted in the application of nitrate of silver solution to the mucous membrane of the naso-pharynx, the frequent washing-out of the nasal cavity, and the emptying of the distended frontal sinus by pressure made with the finger.

Dr. L. Howe, of Buffalo, read a paper entitled,

CHANGES IN THE EYE IMMEDIATELY AFTER DEATH.

The observations were made on a man, aged fifty-four, dying of consumption. One of the conditions noticed was a wrinkling of the cornea, which it was said might readily be mistaken for fracture rupture of the lens. He had also seen the same condition after hanging.

Dr. Norris asked whether any rose-colored macula had been observed after death by hanging. These had been observed in the case of beheaded criminals.

Dr. Howe had observed none.

Dr. Mittendorf called attention to the fact that Dr. Derby had made a report some time ago in reference to the condition of the eyes after hanging. In six eyes examined, in five dislocation of the lens had been observed.

Adjourned.

Second Day—Thursday, July 17th—Morning Session.

CASE OF GLIOMA OF THE RETINA.

Dr. Theobald reported a case of glioma in which he enucleated the eye four years ago. The patient is still under observation and there has been no return of the disease. In another case he had performed the operation. Twelve months later the patient died from some obscure disease of the brain. There had been no return of the glioma. The age of the first case was twelve years, that of the second nine years.

Dr. Mittendorf asked if any of the members had seen a case of glioma in which the patient did not die after operation. Although the operation prolongs life, he thought that it did not save it. It was unusual for the disease to develop as late as in the cases reported by Dr. Theobald.

Dr. Sutphen, of Newark, reported a case of glioma in a child nine years of age. Enucleation was advised, but declined. Five months later the child was brought suffering with choreic symptoms. Thinking that the chorea was due to the eye trouble it was enucleated. The child recovered while taking Fowler's solution.

Dr. Mathewson thought that some of the rare cases in which the disease had not returned after operation might be accounted for by a mistake in the diagnosis.

Dr. Knapp said that there could be no doubt of permanent recovery occurring after true glioma. These cases are, however, rare. In his own experience he had had but one case. This had been under observation for fourteen years.

Dr. William Thompson, of Philadelphia, made a partial report of the progress of the examination of the employees of the Pennsylvania Railroad as to their color-sense and acuteness of vision and hearing. He also considered the importance of national legislation on this subject, and described what had already been done in this direction.

Dr. George C. Harlan reported

TWO CASES OF SWELLING OF THE OPTIC PAPULE, PROBABLY CONGENITAL.

The first case was that of a short-sighted student, who consulted Dr. Harlan in reference to glasses that he was wearing. An ophthalmoscopic examination which was then made showed that there was swelling of the optic papule to the extent of 3 or 4 D. He was advised to be cautious in the use of the eyes. The case was seen subsequently, but no change was noted.

The second case was that of a girl aged fifteen years. She complained of pain in the eyeball, increased by use, and occasional double vision in a vertical direction. There was hypermetropia, and also swelling of the optic papule. Weak convex, slightly smoked glasses were given. With this the vision was $\frac{20}{20}$. A tonic treatment was instituted. The patient sood afterward passed from observation, and has not been seen since.

Dr. Risley reported the case of a young married woman who consulted him for asthenopic symptoms. There was found to be hypermetropic astigmatism and swelling of the nerve to the extent of two or three dioptrics. The condition was the same in both eyes. There had been no dizziness and no more headache than could be accounted for by the eye-strain. There was nothing abnormal about the urine. The proper glasses being given the symptoms disappeared, and a year later had not returned. There had at this time been no change in the appearance of the eye.

Dr. Mittendorf also reported a case of hypermetropic astigmatism with a similar condition of the nerve. He attributed this appearance to an abnormal development of the connective tissue elements of the optic disk. This view was held on account of the silky appearance of the retina. This case had been under observation for over a year.

Dr. G. Hay, of Boston, reported

TWO CASES IN WHICH RAHLMAN'S HYPERBOLIC LENSES IMPROVED VISION.

The first case was that of a lawyer, in whom the cornea was decidedly prominent. Vision was improved by a cylindrical glass, but it was made still better with hyperbolic lenses.

The second case was one of pronounced conical cornea. In this case also vision was much improved.

Dr. O. F. Wadsworth, of Boston, read a paper on

MYXODERMA, WITH ATROPHY OF THE OPTIC NERVES.

The patient was a married woman, forty-two years of age. There was no history of syphilis. Menstruation had been regular until three years ago, when it ceased. Six years ago it was noticed that the lower part of the face, the hands, and the feet became full and œdematous, but did not pit on pressure. This condition increased. At the present time the hands and feet are very much enlarged. The lower part of the face and,

what is unusual, the nose is much enlarged. The lips are thick and the speech is slow, as though the tongue were enlarged. The skin is not particularly dry, but she never sweats. Her mental condition is good, although her husband thinks that her memory is not as good as formerly.

The affection of vision was first noticed in the right eye a year and a half ago. This gradually increased until there was only light perception. In the left eye vision was $\frac{20}{XX}$. The field was contracted upward and outward. The optic disks, especially that of the right eye showed the appearances of simple gray atrophy. No apparent cause could be discovered for this condition. The fact that the atrophy appeared in the course of the myxoderma did not prove that there was any connection between the two, but considering that our knowledge of the cause and pathology of myxoderma is so incomplete he thought it well to place this case on record. He had examined other cases of myxoderma, but this was the only one in which any alteration of vision had been observed.

Dr. Little had also examined the eyes of those suffering with this affection, but had been unable to find anything abnormal.

Dr. Thomas R. Pooley, of New York, read a paper entitled

ACUTE DACRYO-ADENITIS,

A girl, twenty years of age, who for some time had been suffering with chronic trachoma and trichiasis, was seized with diphtheritic inflammation of the conjunctiva of the left eye. This caused the complete destruction of the eye. Three weeks later, when the purulent discharge was beginning to abate, pain began to be felt in the right eye and a swelling made its appearance at the upper outer angle. This was tense and red. Hot applications were ordered and she was put on the use of quinine and iron. The following day an incision was made through the lid, but no pus was obtained. The following day there was marked improvement. The hot applications were continued and a pressure-bandage applied. She made a rapid recovery, and now vision is entirely restored. It was thought that probably the inflammation of the lachrymal gland was due to septic absorption.

Dr. H. Knapp, in speaking of the differential diagnosis, said that the diagnosis could be made by pressing deeply into the orbit. It would then be found that the swelling was limited to the gland, and that it gave a nodular sensation, some of the nodules being harder than others. It is not very rare to have inflammation of one lachrymal gland, but it is rare to have the inflammation appearing in both glands within one or two days. In the cases which he had seen there had been no infectious disease, and in the majority no conjunctival trouble.

Dr. Miller, of Providence, stated that he had had one case of acute bilateral inflammation of the lachrymal gland. The patient was suffering with gonorrhœa at the time and his physician regarded it as a case of gonorrhœal ophthalmia. The inflammation subsided in the course of a few days under the use of hot applications.

Dr. W. F. Mittendorf, of New York, read a paper on

POLYCORIA.

The patient, Miss R——, sought advice for some abnormity of vision. Seven years previously the right eye had been lost. There was compound myopic astigmatism in the left eye. On examining it five pupils were found. With suitable glass V. = $\frac{20}{XX}$, and the range of accommodation was good.

The father of this lady also had a similar defect in the iris. In the right eye there were two pupils, the lower of which was divided into two by a band passing across it.

Dr. W. W. Seely, had examined a family in which a number of its members had polycoria. The interesting point was the termination, all these persons becoming blind.

Dr. Mittendorf stated that his patients were aged thirty-two years and sixty-five years, and that neither had exhibited any indication of failing sight.

Dr. E. Hutchinson, of Utica, described

A PLASTIC OPERATION PERFORMED TO RELIEVE THE CLOSURE OF THE LIDS, THE RESULT OF CICATRIZATION.

The man had his face injured by the premature explosion of a blast. This caused destruction of the left eye, and such contraction of the lids of the right eye that it was impossible for him to open them. The sight of the right eye was uninjured. The operation consisted in cutting deeply through the external commissure, then dissecting up a web of conjunctiva which was put into this opening and secured there. After he had recovered from this operation there was great ectropion, which was relieved by making a deep V-shaped incision and free dissection and bringing the parts together. The lid was thus restored and a very satisfactory result obtained.

Dr. J. Aub, of Cincinnati, read a paper on

REMOVAL OF FOREIGN BODIES FROM THE VITREOUS.

He reported three cases in which pieces of iron had entered the vitreous humor. In all of these the piece of iron was removed by means of an electro-magnet passed into the eye. In these cases the eye and the sight were saved.

A fourth case was reported in which the piece of iron had become encysted and could not be removed with the magnet. In this case it became necessary to enucleate the ball, and after the removal of the eye it was found impossible to remove the foreign body with forceps before cutting the lymph which surrounded it.

Dr. Knapp said that where a foreign body can be seen, it is usually not a difficult matter to remove it, the question was as regards those cases in which it passes out of sight. He had in one case succeeded in removing the foreign body. He felt inclined to say, judging from his own experience and the recorded experience of others, that those cases in which the foreign body enters the eye and passes out of sight, the best thing to do would be to enucleate the eye. In this way he thought that the greatest good would be done to the greatest number.

Dr. Mittendorf, agreed in this opinion.

HYPERMETROPIC ASTIGMATISM PASSING INTO MYOPIA,

was the title of a paper by Dr. S. D. Risley, of Philadelphia. In 1875, he had seen a child suffering from violent headache. There was hypermetropic astigmatism. The ophthalmoscope revealed the usual appearances of choroidal and retinal irritation. With a suitable cylindro-spherical glass vision was normal. This entirely relieved the symptoms. The patient passed from observation and was not seen until 1882. At this time there was found to be myopic astigmatism. The proper glasses being given, the symptoms from which she had suffered disappeared and vision was again made normal.

Dr. Knapp thought that many of the cases of astigmatism in young girls of nervous temperament were not real deformities of the cornea, but that they would disappear under proper hygienic surroundings. He thought that slight degrees of error might be overlooked.

Dr. Theobald said that the indication for correction in slight degrees of myopia was the presence of asthenopic symptoms, which are sometimes due to disproportion between accommodation and convergence. In slight degrees of myopia, where there is no asthenopia there is no discomfort, and correction may not be necessary.

The Society then went into executive session.

The following officers were elected: *President*—Dr. W. F. Norris, Philadelphia; *Vice-President*—Dr. Hasket Derby, New York; *Recording Secretary and Treasurer*—Dr. O. F. Wadsworth, Boston; *Corresponding Secretary*—Dr. J. S. Prout, Brooklyn; *Committee on Publication*—Drs. O. F. Wadsworth, Hasket Derby, and G. Hay; *Committee on Membership*—Drs. John Green, G.

C. Harlan, A. Mathewson, S. Theobald, and J. J. B. Vermyne.

The following were elected to membership: Dr. Miles Standish, of Boston, Mass.; Dr. John Van Duyn, of Syracuse, N. Y., and Dr. S. O. Richey, of Washington, D. C.

The place for holding the meeting of next year was not decided on, but its selection left to the secretary. The time of meeting is the third Wednesday of July.

The Society then adjourned.

THE SURGICAL SOCIETY OF PARIS.

Stated Meeting, June 4, 1884.

M. Marcus Sée, President, in the Chair.

(Special Report to The Medical Record.)

After the Society had been called to order, the report was read of the committee for the organization of an

ANNUAL CONGRESS OF FRENCH SURGEONS.

This report gave rise to a lengthy discussion.

M. Boeckel then read the history of a case operated upon by himself for the

REMOVAL OF THE ENTIRE UTERUS PER VAGINAM

on account of cancer of the cervix. The operation was undertaken in October, 1882. After pushing the uterus as far down as possible, the posterior cul-de-sac was divided by a transverse incision, and the anterior part dissected away, so as to leave the organ attached only by the broad ligaments. A double ligature being placed on each, the ligaments were then divided. In the left broad ligament M. Boeckel found an enlarged and degenerated gland, which he excised. This was followed by a free hemorrhage, which was arrested by hæmostatic forceps applied somewhat at random and left *in situ*. As the intestines showed no tendency to come out through the wound, no sutures were passed through the peritoneum. The vagina was tamponed with cotton dusted with iodoform.

The patient seemed to be making a good recovery, until it was found that the urine was constantly passing away from a wound made in the left ureter by the hæmostatic forceps. The only remedy for this condition seemed to be

NEPHRECTOMY,

which was accordingly performed. The patient recovered promptly, and was discharged cured two weeks after the last operation. Seven months later, however, she died from cancerous infiltration of the vaginal walls and the neighboring glands.

From a study of this case M. Boeckel concluded that: first, the antiseptic method renders justifiable the undertaking of very serious operations; and, second, the total extirpation of the uterus should be considered an exceptional operation, to be undertaken only when the cancerous infiltration is localized.

M. Verneuil agreed with the author that hysterectomy ought to be undertaken only in exceptional cases. He thought that the treatment of carcinoma of the uterus by cauterization and local applications gave the best chance to the patient.

M. Terrier had recently performed this operation, and spoke of the difficulties attending it. One of the greatest of these is met with in pulling down the broad ligaments, so as to permit the application of the ligatures.

M. Polaillon did not agree with the author of the paper regarding the indications for the operation. He would operate only in those cases in which the entire organ, and not the cervix alone is involved in the cancerous process. But if the new growth has advanced very far no operation is of any avail.

M. Lucas-Championnière had seen Billroth perform the operation in a case in which one of the broad ligaments was involved in the carcinomatous degeneration, and was surprised at the ease with which the removal of the organ was accomplished. The main difficulty he thought was one of diagnosis.

M. Terrier did not agree with M. Polaillon, but advocated the removal of the entire uterus. He thought that the attempt to destroy the new growth by the galvano-cautery and chloride of zinc was not unattended with danger.

M. Trélat did not think the results obtained in the past seven years by extirpation of the uterus were such as to offer much encouragement. He himself had never had the courage to attempt it. Indeed, he thought there was little to hope for in any operation, as by the time that the patient fell into the surgeon's hands the disease was usually very extensive.

M. Bouilly was convinced, from experiments made upon the cadaver, that it was often impossible to depress the uterus sufficiently to render the vaginal operation practicable.

M. Polaillon stated, in support of his opinions, that the mortality in total extirpation of the uterus was one in three, while that from removal of the cervix was three in twenty. He had had two cases of removal of the new growth by the galvano-cautery and chloride of zinc, in which there was no return of the disease after five years. Another patient, seventy-two years of age, operated upon by the same method, had remained well for one year.

M. Boeckel then exhibited a patient, seventeen years old, upon whom he had performed

OSTEOTOMY BY MACEWEN'S METHOD

for knock-knee. He had performed upward of twenty osteotomies and nearly as many osteoclasies. The results of osteotomy were uniformly good, but he had met with three accidents in his osteoclasies. In one case he had ruptured the external lateral ligament; in another, a suppurative periostitis had been excited which required four months to cure; and in the third case there remained an incurable pseudarthrosis.

The Society then adjourned.

Stated Meeting, June 11, 1884.

The Society having been called to order, the

DISCUSSION ON VAGINAL HYSTERECTOMY

was resumed.

M. Verneuil stated that he had performed ablation of the cervix twenty times, twice for hypertrophy of the anterior lip, once for sclerosing metritis, which he had mistaken for an epithelioma, and seventeen times for cancer. Of the latter cases one had died and two had been lost sight of after three years had elapsed without return of the disease. Of the remainder the average duration of life after the operation was nineteen months. The speaker did not condemn the total extirpation of the uterus, but he considered that the existence of a limited epithelioma of the cervix was not a sufficient indication for the operation.

M. Desprès had removed the cervix seven times, three times for hypertrophy of the anterior lip, and four times for cancer. He did not think that an operation was of much value in prolonging life, for the average duration of life in those not operated upon was eighteen months. When the general condition was bad, life was prolonged not one hour by the removal of the new growth.

M. Trélat was surprised that M. Verneuil should have had so many opportunities to practise amputation of the cervix, since the patients usually present themselves to the surgeon only after the disease has progressed too far to render this operation of any avail. He was in accord with that gentleman in respect to the methods of treat-

ment employed, and he believed that these methods were the best adapted for prolonging life. He had seen patients gain flesh and be restored to apparent health under this treatment of the local affection.

M. BERGER then made a report upon a memoir submitted by M. Kirmisson entitled

INGUINAL ANEURISMS.

The author stated that the appearance of an aneurism in the groin is often preceded by an abscess or enlargement of the inguinal glands. Malgaigne and others had already noted this fact. As regards the treatment, M. Kirmisson expressed a decided preference for

LIGATURE OF THE EXTERNAL ILIAC ARTERY

over either mechanical or digital compression. Of the four methods at present in vogue he would retain two, those of Sir Astley Cooper and Marcellin Duval. The procedures introduced by Bogros and Abernethy he looked upon as dangerous. The author did not regard the wounding of the peritoneum as a serious complication, but on this point M. Berger differed from him very decidedly, and he insisted upon the necessity of laying aside the bistoury as soon as the aponeurosis of the obliquus externus had been divided. Secondary hemorrhage, when it occurred, was to be attributed, M. Berger thought, to non-uion of the wound and to suppuration.

M. VERNEUIL did not agree with M. Berger as to the cause of secondary hemorrhage. It was due, he believed, to septicæmia. When there was no fever there was no cause to anticipate hemorrhage.

M. DEPRÈS, while believing with M. Verneuil that septicæmia was a common cause of secondary hemorrhage, thought that the accident was not less frequently due to mechanical causes.

M. FARABŒUF showed the excellence of Cooper's operation, by which the artery is reached most surely and by the shortest path. He agreed with M. Berger that no cutting instrument should be used after the division of the aponeurosis of the external oblique muscle had been accomplished.

M. TERRIER related a case of

EXTIRPATION OF THE SPLEEN,

and exhibited the organ removed, which weighed a little over thirteen pounds. The patient was suffering from a slight degree of leucocythæmia, the examination of the blood showing a proportion of one white to two hundred and seventy-five red globules. The operation was successfully completed, but the patient died twenty hours afterward from capillary hemorrhage into the peritoneal cavity. The result in this case, the speaker thought, lends confirmation to the views of those who refuse to perform any operation upon the subjects of leucocythæmia. Such operations are nearly always fatal, though an Italian surgeon has reported one successful case in which the proportion of white to red corpuscles was as one to thirty.

The Society then adjourned.

THE QUESTION OF TYING THE UMBILICAL CORD AFTER LABOR.—Dr. John T. Booth, of Wyoming, O., relates the history of a case where an illegitimate child was born and the cord was cut but not tied. The probable object was to let the child bleed to death. Instead of this it did well, there being no hemorrhage at all. Dr. Booth raises the old query whether tying the cord is necessary. Some have claimed that it is not, and undoubtedly in many, if not in most cases, there will be no hemorrhage if the physician wait till the child has breathed a few times. But the present practice of tying is a safe and wise one.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE MEDICAL BILL AND ITS CHANCES—THE COLLEGES—OBSTRUCTION AT THE COLLEGE OF SURGEONS—THE RECENT DISAGREEMENT AT THE COLLEGE OF PHYSICIANS.

LONDON, July 19, 1884.

THE present aspect of medical affairs is far from reassuring. I am afraid, if your readers were to give an impartial opinion on what may be termed medical politics here, it would be very far from complimentary to the powers that be.

The Government Medical bill is very likely not to pass, and few tears will be shed over it should it fail. There is scarcely any chance of its passing except in an emasculated and mutilated condition, and I believe the general opinion of the profession is that sooner than pass such a bill we had better go on as before. It is feared that the Government will accept Sir Lyon Playfair's amendment, which virtually neutralizes any good the measure may effect, by allowing the twenty licensing bodies to go on as before. Many people imagine this gentleman to be a medical man, as he was formerly termed Dr. Playfair. The doctorate was a German Ph.D., and its owner has no claim to represent the profession, although at the last general election Dr. Playfair so adroitly used his title as to make many of his constituents think he was really a medical man.

What are the colleges about? Nothing creditable. At the Surgical College the obstructives continue in power. They form a nice little family party, and when examinerships fall vacant elect one another to them, and draw nice salaries. The Senior Vice-President, Mr. Savory, has received £9,000 as fees for acting as examiner for a long series of years—about twenty, I think. He is one of the most unpopular examiners the college ever had, and is reputed—justly or unjustly—to delight in plucking. He is not ungentlemanly; he often smiles blandly on his victims, and the worse their ignorance the more pleased Mr. Savory seems. The only faint hope of reform lies in the fact that the Council have carried Mr. Heath's motion to "consider the mode of electing the president, and any alterations suggested in the method of proceeding in the election" in November next. Meanwhile, to break the old vicious rule of going by seniority, Mr. Holmes, the Junior Vice-President, declares that when it comes to his turn he will decline the presidency. We hope Mr. Holmes will have the courage of his convictions. If he has, he will acquire more repute as a reformer than he has ever done either as a teacher or an examiner.

Meanwhile the sister college has been rioting with closed doors. The proceedings of the Fellows have been declared to be *secreta collegii*, so they do not appear in the medical journals. What really occurred is no secret, although the most important part of the affair has not as yet been discussed in print. Some weeks ago, at a meeting of Fellows, the usual list prepared by the Council of proposed new Fellows was submitted to the Fellows present, and—unheard-of insolence—rejected by them. Why? The real grievance is that, of those proposed by the Council, almost all of them are not practising purely as physicians at all, although, of course, they all possess the M.R.C.P. The objectors, in fact, described them as general practitioners. Another wound was the fact that the list did not comprise a single University man. I must explain that by a "University man" the older members of the profession mean a graduate of Oxford or Cambridge. In times past these alone were eligible for the Fellowship. Sir William Jenner is an M.D. Lond., and not a blind worshipper of tradition. On the present occasion, so far from denying what

in fact could not be denied, he got up and defended it. He said the college had tried to get the general practitioners to join it and take the L.R.C.P., which was instituted for them, and, in short, why shouldn't general practitioners be made Fellows? This was virtually the gist of his argument, but the Fellows did not see as he saw, and after a stormy discussion refused the list bodily. Thereupon the Council took a month to consider before making out another list, and have even taken counsel's opinion. However, the real subject of offence has been declared to be a college secret, so none of the journals give any account of it, but merely give a meagre outline of what took place.

Meanwhile, those who have been offered the Fellowship by the Council and refused it by the Fellows are in a nice position. It is now customary for those who are proposed by the Council to be officially asked whether they will accept the proffered dignity (and pay their fifty guineas) before bringing their names publicly before the Fellows. Many years back, two gentlemen who had been duly elected Fellows in the general meeting of Fellows refused point-blank to accept the Fellowship. To avoid future indignities of this kind the Council adopted the present plan. Now where are they?

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from July 27 to August 2, 1884.

HEAD, JOHN F., Colonel and Surgeon. Ordered to Portsmouth, N. H., to meet the Greely party, and consult upon the proper course of treatment, with a view to the entire restoration to health of Lieutenant Greely and the men of his command. S. O. 177, par. 14, A. G. O., July 30, 1884.

WRIGHT, JOSEPH P., Major and Surgeon. Sick leave of absence extended three months on surgeon's certificate of disability. S. O. 176, par. 12, A. G. O., July 29, 1884.

WOODWARD, JOSEPH J., Major and Surgeon. Sick leave of absence extended six months. S. O. 178, par. 9, A. G. O., July 31, 1884.

MCELDERRY, HENRY, Captain and Assistant Surgeon. So much of S. O. 165, par. 12, A. G. O., July 16, 1884, as assigned him to duty in Department of the East, is revoked, and he is ordered to report in person to the Surgeon-General of the Army for duty in connection with the World's Industrial and Cotton Centennial Exposition at New Orleans, La. S. O. 173, par. 12, A. G. O., July 25, 1884.

FINLEY, J. A., Captain and Assistant Surgeon. Granted leave of absence for one month, with permission to apply for one month extension, to take effect about September 1, 1884. S. O. 91, par. 2, Headquarters Department of Texas, July 22, 1884.

TAYLOR, A. W., First Lieutenant and Assistant Surgeon. Ordered for temporary duty at Fort Riley, Kan. S. O. 153, par. 1, Headquarters Department of the Missouri, July 29, 1884.

GANDY, C. M., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, to commence between August 15th and 30th, provided he furnish medical attendance at Fort Brady, Mich., during his absence. S. O. 144, par. 4, Headquarters Department of the East, July 30, 1884.

A MAN DURING A LIFETIME OF FIFTY YEARS, according to a paper recently read before the Academy of Sciences, Paris, sleeps away an aggregate of six thousand days, works away the same period, eats away two thousand days, walks away eight hundred days, is ill during five hundred days, and amuses himself with the remainder of his half century on earth.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending August 2, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
July 26, 1884	0	22	49	5	150	36	0	0
August 2, 1884	1	24	35	3	94	22	0	0
Deaths.								
July 26, 1884	0	10	10	5	31	18	0	0
August 2, 1884	1	6	7	3	19	14	0	0

PREVENTION OF ATTACKS OF CHOLERA.—Surgeon-General Cornish says: "It is within the experience of all, that an attack of cholera in the individual is often aborted by timely treatment. During an epidemic, what can be commoner than the following typical case? A man is suddenly seized with a feeling of oppression and sinking about the epigastrium, followed by two or three frequent and copious watery evacuations, and, if there be no actual sickness, a feeling of nausea and faintness. Such attacks often occur in the early morning, the patient having gone to bed perfectly well, and slept soundly until the desire to relieve the bowels was felt. Besides these symptoms, there is generally a clammy skin, a weak pulse, and much nervous anxiety. Now, let a case of this nature be treated instantly, by some combination of opium with a diffusible stimulant (a full dose of chlorodyne and brandy is perhaps the best and simplest remedy to be found at hand), let him be put to bed, and have warmth applied to his feet and epigastrium, so as to favor sleep. In nine cases out of ten, when the patient falls asleep, the diarrhœa is checked; and when he awakes, he will feel quite easy and comfortable. In the tenth case, the remedy may fail and the disease progress until all the symptoms of aggravated cholera appear in their due order. What becomes of the *contagium* of cholera, supposing the disease be due to an infective germ, when the early diarrhœa is checked?"—*Indian Medical Gazette.*

THE ETHICS OF THE SKIN.—Mr. Malcolm Morris, one of the ablest and most versatile of our brilliant younger school of dermatologists, has, says the *British Medical Journal*, made a decided hit by his sparkling and amusing, but very sensible and useful lecture, under this head, at the International Health Exhibition. The lecture was a pungent criticism of some of the morbid aspects of modern æstheticism. First, it was shown physiologically how much of a man's individuality lies in the skin. Remove an arm or a leg, or both arms and legs, there is yet left an individual man. But take away the skin, as the author of "Sartor Resartus" took away the raiment, and individuality is gone. The color of the complexion is due to the pigment-follicles, the red color of the cheeks to the terminals of the blood-vessels, seen through the transparent skin. The color of the skin is a test of health. But, within the last few years, we have experienced a remarkable artistic movement. The effects have been evident in the picture-galleries, they have displayed themselves in domestic life. Lastly, there has sprung up a taste that can only be postulated as a taste for disease, decrepitude, and decay. In one school, we find a bevy of woebegone women, ill, limp, and unwholesome. The men are not more attractive in a sanitary sense. They look like convalescents, ill-fed, and out of condition. This school is not very wide in its range, but

its influence is felt beyond the limits of its own lines. In the paintings of the older masters are ruddy Madonnas, clear-skinned goddesses, and chubby angels. In the more recent pictures, an etherealized skin is unduly popular. Of course, this repudiation of warm tints suited unhealthy people. Fashions change; and a time may come when it will be fashionable to be healthy, when normal hair will be popular, and natural skin the rage. When this sanitary millennium is reached, it is possible that the world will recognize that it is not attractive to daub the face with starch and rouge and bismuth, and paint after the manner of the heathen; that the bloom upon the peach cannot be beautified by whitewash; and that no chemical process can heighten the tinting of the heather-bell.

Corrosive Sublimate Solutions.—Sir Joseph Lister writes to the *British Medical Journal* that one drachm by weight of a solution of one part of corrosive sublimate in one part and a half of glycerine contains two-fifths its weight, or twenty-four grains of the sublimate. This, multiplied by 1,000 (the proportion of water required), gives 24,000 grains, which is very nearly three pints. It is, however, much more convenient to use fluid measure than weight, and a fluid drachm to the glycerine solution referred to requires four pints of water to produce the 1 to 1,000 solution.

The Micro-organism and Vaccine of Yellow Fever.—Prof. Domingo Freire, President of the Central Junta of Public Hygiene, Brazil, has sent to the *Sanitary News* an account of his experiments with the vaccine of yellow fever. We extract the following, calling attention to the unsatisfactory way in which he estimates the protective value of his attenuated virus: "The method of culture which I have followed is Pasteur's. I withdraw blood, or any other organic liquid, from persons sick with yellow fever, or from the bodies of the dead, using the most scrupulous precautions, and introduce these liquids into Pasteur's flasks, previously sterilized, and containing a solution of gelatine or beef 'bouillon.' In these conditions the microbe develops abundantly, and becomes of itself attenuated by the action of the air, which filters through the tampion of amianthus with which the flask is corked. The purity of these cultures is demonstrated by microscopic examinations, of which you will find a good illustration in my memoir 'Experimental Studies on the Contagion of Yellow Fever.' The microbe appears in the form of little black points, like grains of sand (780 diameters); in the mature form it presents the appearance of round cells with an ash-gray or black rim, containing in their interior yellow and black pigment and some granulations which will be the future spores. These cells burst at a given moment, and pour out their contents, *i.e.*, the spores, the pigments, and a nitrogenous substance composed of ptomaines, which I have isolated not only from vomited matter, but also from the blood itself, and from the urine. The yellow pigment, being very soluble, produces the icteric infiltration of all the tissues by a sort of tinctorial imbibition which may go on even after death; the black pigment, as well as the detritus resulting from the rupture of the cells, being insoluble, is carried into the general circulation and produces obstructions in the sanguine capillaries, whence the apoplectic symptoms so common in yellow fever, and in the urinary tubules, whence the suppression of the urine, a very frequent and terrible symptom in this disease. I have described this microscopic organism under the name of *Cryptococcus xanthogenicus;* its development resembling that of this genus of algæ. After having demonstrated the contagious nature of yellow fever by experiments upon barn-door fowls (see my memoir), I made experiments in preventive inoculations, first upon animals and afterward upon men. I did not fear to do this, because a multitude of experiments upon animals had previously convinced me of the perfect safety of inoculation with attenuated cultures. Up to this date I have vaccinated four hundred and fifty persons, for the most part foreigners recently arrived. Freedom from yellow fever has been pronounced among those thus vaccinated, for they have passed through a quite severe epidemic, and only six deaths have occurred among the four hundred and fifty vaccinated persons, that is to say, less than two in a hundred, while more than a thousand deaths have occurred among the non-vaccinated; the mortality of the non-vaccinated sick being about thirty to forty per hundred. Thus, if we take one hundred vaccinated persons, under the most favorable conditions as regards receptivity, we have only two deaths during the entire epidemic; if we take one hundred non-vaccinated sick, we have thirty to forty decedents, which gives a mortality fifteen times greater among the non-vaccinated. Even if the mortality were only ten times or five times less great among the vaccinated, the preventive measure would be worthy of adoption. The protective inoculation for charbon gives an immunity to one-tenth, and that of vaccination for small-pox guarantees an immunity to one-fifth, according to the calculations of Bousquet."

Where Hip Diseases are Treated.—Dr. N. M. Shaffer, of this city, writes: "Will you please permit me to correct a misstatement which occurs in your issue of May 31st, in your review of Dr. Gibney's work on 'The Hip and its Diseases?' The reviewer alludes to the Hospital for the Relief of the Ruptured and Crippled, of which he says, 'where more cases of hip disease are annually treated than in any other similar institution in the country.' A few brief extracts from the annual reports of the Hospital for the Relief of the Ruptured and Crippled and those of the New York Orthopædic Dispensary and Hospital will prove the incorrectness of your reviewer's statement. Cases of hip disease annually treated by the Hospital for the Ruptured and Crippled: For the year ending April 30, 1879, 167; for the year ending April 30, 1880, 160; for the year ending April 30, 1881, 170; for the seventeen months ending September 30, 1882, 251; for the year ending September 30, 1883, 173. Total for five years and five months, 921. Cases of hip disease annually treated by the New York Orthopædic Dispensary and Hospital: For the twenty-one months ending September 30, 1880, 401; for the year ending September 30, 1881, 328; for the year ending September 30, 1882, 376; for the year ending September 30, 1883, 420. Total for five years and nine months, 1,525."

Benzoin promotes bronchial and cutaneous exhalation; a large part of the acid is excreted by the kidneys as benzoic acid, and a part is changed into hippuric acid, so that it renders the urine decidedly acid. It and the benzoate of ammonia are very useful when the urine is very alkaline or ammoniacal, and loaded with phosphates. It renders the urine acid, and arrests ammoniacal and fermentative changes in the bladder. Phosphatic calculi are said to be dissolved by the long-continued use of it. Foul smelling, unhealthy, and sloughing wounds, and flabby granulations are improved by the ointment or tincture. It destroys fetor and stimulates to a more healthy growth. It has some antiseptic powers, and prevents fermentation and putrefaction, and is as useful in ulceration of the bowels as it is in open superficial ulcers. It may be given in pill form.

Errata in Dr. John N. Mackenzie's Article on Coryza Vasomotoria Periodica, in The Medical Record of July 19th.—Page 59, first column, 25th line from commencement of article, for "mere" read "more;" second column, 18th line from top of page, for "intelligent" read "intelligible;" 25th line from top of page, for "Daley" read "Daly." Page 60, first column, 39th line from top, for "imparted" read "impacted;" second column, 15th and 23d lines from top, for "Haek" read "Hack;" 44th line, for "bulging" read "overlying." Page 63, 37th line from top, for "cough" read "sneezing."

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Original Articles.

THE CAUSES OF DISEASE,

AS VIEWED FROM THE STANDPOINTS OF PREDISPOSITION, HEREDITARY INFLUENCES, RACIAL PROCLIVITIES, EPIDEMIC CONSTITUTION, AND VITAL RESISTANCE.

Being the Substance of the Presidential Address delivered July 29, 1884, before the Fifty-second Annual Meeting of the British Medical Association, held in Belfast, Ireland.

BY JAMES CUMING, M.D., F.K.Q.C.P.,

PRESIDENT-ELECT OF THE ASSOCIATION, AND PROFESSOR OF MEDICINE IN QUEEN'S COLLEGE, AND PHYSICIAN TO THE ROYAL HOSPITAL, BELFAST, IRELAND.

(Special for THE MEDICAL RECORD.)

THE principal interest in regard to the progress of medical science is at present concentrated on the study of minute organisms as causes of disease. The identification of the special parasites, the study of their mode of invading the body, of the places of their development, of their effects in respect of nutrition, function, and tissue-change, present subjects for investigation of surpassing interest and engage the attention of numerous observers. Evidence is rapidly accumulating which leaves little room to doubt that micro-organisms are the active agents in the production of epidemic and endemic diseases. A flood of light has been thrown on some of the obscurest points of pathology, the reproduction and increase of contagious elements, the immunity acquired by passing through a disease against a recurrence of the same malady, and on the question of the incubation and latency of contagious diseases. Nothing can be of greater interest than the observations on the attenuation of virus, opening out unexpected possibilities of mitigating the severity of some of these scourges of the human race, and making the hope of the ultimate extirpation of several of them not altogether a fantastic one. In the main we have to look to foreign observers for our instruction in these subjects, for in these countries the researches necessary to elucidate such problems are trammelled by legislative interference and markedly discouraged by popular sentiment. In recent years it had become one of the commonplaces of general addresses on medicine that disease was to be regarded as simply a perverted life-process, and that there was an essential identity between physiological and pathological processes. We used to congratulate ourselves on the strides we had made in advance from the notions of the earlier physicians who regarded disease as an intrusive foreign element at war with the vital principle. Boerhaave is credited with being the first to formulate the great principle, "Morbus est vita præter naturam." And undoubtedly this conception did lead to clearer notions of many of the phenomena of chronic disease. But what is the outcome of the most recent researches on bacterial action? It is, that when bacteria enter a tissue they come into conflict with the proper tissue-elements, abstract the nourishment contained in the juices to the detriment or exclusion of the normal cells, and give rise to different chemical changes which disturb the normal metabolism of the healthy parts. After all, in different language, the old idea was not so very wide of the mark as we supposed. If the vital activity of the parasite gets the upper hand, the life of the normal cells of the organism is enfeebled or destroyed, and *vice versa*. It is the old struggle between Ormuzd and Ahriman within the sphere of nutritive activity. Now investigations on these subjects, can only be conducted by those who have the leisure and aptitude for original research, and must accordingly be left in the hands of the few. But there is another vast field of inquiry which is not beset with the same difficulties, and which forms the necessary complement of the study of the parasite. We know that there must be a certain receptivity in the system, some diminution in its wonted powers of resistance, or some original proclivity—something which we are in the habit of terming predisposition—which renders the body liable to the attacks of the parasite and furnishes an appropriate soil for its growth. This predisposition may be either a general one expressed by a proclivity in some countries or in certain races, or in particular temperaments, or it may have been acquired by the individual either at a certain period of life, or under the influence of a variety of causes in his diet, occupation, or surroundings.

Now it is precisely with reference to these points that we can get most light—I had almost said the only light—from the general experience of the profession. A great deal of medical literature is founded on hospital practice, which, valuable as it is, wants the element of time. The floating population of hospitals passes rapidly from under observation, and it is only from the medical men who have known patients for years, and often the stock from which they come, that we can get information which necessarily presupposes continuous observation spread over long periods.

It is in respect to questions of this kind, which are so clearly within the scope of every practitioner of medicine, that I look for the best results from the labors of the Collective Investigation Committee, which I have no doubt will prove one of the most valuable of the agencies for good in this Association; and I am not without hope of a still larger and more ambitious effort, which will embrace not only this but all civilized countries in its operation, and that we may have an international collective investigation of disease. From such an organization we could obtain an immense amount of information on the subject of climatic and telluric influences, and on the question of racial proclivities to disease, as well as on the important subject of diathesis.

The subject of the proclivities of different races to disease is one of great interest, and has been but little investigated. The facilities which the vast colonial empire of England offers for observation to medical officers of the public services have enabled them to see much of disease in different countries of the world; and, no doubt, there is a good deal of information entombed in the army and navy reports, but we have but little definite knowledge. That the negro race enjoys a comparative immunity from yellow fever, and that even a slight admixture of negro blood brings with it a certain degree of protection from this malady, seems well ascertained. The comparative freedom of the same race from stone, and, on the other hand, their marked liability to elephantiasis and to tetanus are clearly made out. Again, there is reason to believe that different branches of the Aryan or Indo-European family present some peculiarities in respect of liability to morbific influence.

In France, where, from the requirements of military service, statistics with respect to some classes of affec-

tions are easily accessible, it has been found that in the provinces where there is most Teutonic blood there is a notably greater number of exemptions from service owing to varicose veins and hernia than those in which the inhabitants are of Celtic origin. On the other hand, it is considered by some that the Celtic people do not bear surgical operations so well. When Velpeau was reproached with the greater mortality after operation in Parisian, as compared with English hospitals, he is reported to have replied that the flesh of a Frenchman was not the flesh of an Englishman. And all who, in recent years have had the privilege of visiting the wards of M. Charcot in the Salpetrière, have been able to notice a variety of rare and complex diseases of the nervous system which are certainly but rarely to be met with in these countries, and which he has used in so able and instructive a way. Again, it is probable that drugs act differently on different races; the negro, for example, bearing mercury better than the white, and being somewhat differently affected by opium. There are also the analogous facts of the insusceptibility of some animals to poisons which act with fatal effect on others.

Without entering on the subject which was so hotly debated some time ago, whether a change of type in disease has taken place, there can be no doubt that a change of epidemic constitution, using the term in a wide significance, has taken place, and that the same diseases do not prevail with the same frequency. There can, I think, be no doubt that typhoid fever is much more common in Ireland than formerly, if indeed it existed at all, and that typhus is much less frequent.

Now the important subject of diathesis is closely allied to this class of inquiry, and is eminently adapted for collective investigation. It is a condition in which large numbers of individuals are implicated, and in which a large array of facts is of primary importance, and it is also one in which continuous and prolonged observation is eminently and especially necessary.

What may be the nature of the peculiarities of structure and of function which imprint a particular character on the morbid manifestations which an individual exhibits it may not be possible for us to ascertain with certainty, but there is no fact capable of more overwhelming clinical demonstration or which is of more cardinal importance in the management of disease. It is a state in which, under the influence of exciting causes, or perhaps without any exciting cause, morbid phenomena are manifested, diverse in their seat, their extent, and their character, but united by a common pathological bond, which is shown in their mode of evolution and recession, and in a kindred demeanor with respect to therapeutic influences. It is a constitutional state which exists before, and often long before any local manifestation whatever, which is, I have said, obscure as regards its nature, but distinctly recognizable in its effects, and which we know in several instances to arise from well-recognized causes. It enrolls the individual who is affected with it in a category apart from those who are not under its influence, and in this way approximates to a racial peculiarity, the analogy being all the closer that diathesis is in many instances capable of transmission to the descendants of those who are its subjects.

I dwell on this the more because I think it specially the province of the practical physician, and because it constitutes the most typical expression of a class of facts which are forced on us by daily experience. We all know that an affection of the nervous system or the digestive system represents a different thing, as regards the outlook and the present danger, in one family as compared to another. There are not wanting indications of a tendency which takes its direction from very high quarters to assign an undue predominance to anatomical change to the exclusion of constitutional states. The greatest living pathologist, Professor Virchow, of Berlin, in his address at the International Medical Congress in 1881 spoke as follows: "How has it now come to pass that symptomatology has entirely lost the high position in which it still stood little less than a generation ago, to such an extent that in most universities it is no more taught as a specialty? Have symptoms no more any importance for the physician? Can a diagnosis be made without a knowledge of symptoms? Certainly not. But for the scientific physician the symptoms are no more the expression of a hidden power, recognizable only in its outer workings; he searches for this power itself, and endeavors to find where it is seated in the hope of exploring even the nature of its seat. Hence the first question of the pathologist and of the biologist in general is, Where? That is the anatomical question. No matter whether we endeavor to ascertain the place of the disease or of life with the anatomical knife or only with the eye or the hand, whether we dissect or only observe, the method of investigation is always anatomical."

I do not think that this doctrine will find acceptance with practical physicians. We believe that many morbid phenomena are not to be looked for as merely the expression of local change, but as portions of the effect of some specific cause; that the disturbance of function, otherwise the symptom, often precedes the tissue alteration, and that we might be justified in stating the seeming paradox, that the symptom sometimes causes the lesion rather than that the lesion causes the symptom. Medicine teems with instances in which anatomical change alone would lead us very far from the result which clinical observation indisputably establishes, and there is no lesson which experience teaches a physician more decisively than that it is not the extent or degree of an inflammatory affection which furnishes the most accurate measure of its danger or the most reliable indication for its treatment. Indeed, in dealing with many cases of disease our question is not, Where is it? but, What is it? Is it gout or syphilis or malaria? and so on; as we are well assured that if we have got the key to the enigma all the varied anatomical changes will become explicable, and, what is of far greater moment, will be found amenable to remedies. We have often occasion to observe that anatomical changes, not to be easily differentiated, follow from life processes which are very dissimilar. That symptoms without morbid anatomy are inadequate and misleading for the purposes of the physician, has been only too amply demonstrated in the records of medicine; but it is no less certain that morbid anatomy without symptoms—that is, without giving a due and even a preponderating weight to the origin and progress and vital character of the disease—will lead to error hardly less disastrous.

It had been one of the characteristics of Irish medicine that this conception of the essentially vital character of morbid manifestations has been firmly grasped and strongly insisted on. In the latest work of Dr. Stokes—a name always to be mentioned with honor as one who was an honor alike to his profession and to his country, and who has special interest for this Association, of which he was President at the Dublin meeting—he says:

"So far as medical experience goes, we are forced to admit that the foundations for the healing art must rest on another, if not a broader basis than that of anatomical and of chemical changes in disease. There are differences—and for want of a better name we may call them vital—which more intimately relate to life and health than to the anatomical or chemical changes produced by disease; and these are to be reached by the study of the living phenomena of the body and of the influence of agents upon them. In truth, the fruitless attempt to base medicine upon anatomical or even chemical changes should be a lesson to those who neglect the infinitely varied mutations of vital or of nervous action."

It is not that this great physician did not recognize in the fullest manner the necessity for the closest physical examination during life and the most careful scrutiny of morbid products: much of the labor of his life, as is well

known to us all, was devoted to the elaboration and perfection of that physical diagnosis of which he was so consummate a master; but that he refused to recognize the results of disease as adequate to the interpretation of morbid processes.

It is impossible not to believe that if clinical evidence had not been allowed to be overborne by pathological theory, there would have been much less difficulty and much less confusion about the relationship between pulmonary consumption and struma or scrofula. We may select this as an illustration, because scrofula is an affection with which we are very familiar in this country, although probably it is not more general here than in England and Scotland. On broad public grounds there are few conditions of greater moment than scrofula as influencing the well-being and development of the youth of the community. Defacing the comely skin and clouding the clear eye of childhood, disfiguring and scarring the neck and crippling the supple limbs, it is undoubtedly one of the most wide-spread and unsightly forms of human infirmity. Complex in its causation, and favored by all the concomitants of poverty, insufficient diet, scanty clothing, want of light and air and sunshine, it is no doubt in many instances connected with the use of a dietary deficient in animal and vegetable fats, a view strongly advocated by the late Professor Hughes Bennett, and which has received the support of an authority no less eminent than Mr. Jonathan Hutchinson.

Now I cannot but believe that if the facts of the clinical history of scrofulous affections had not been overborne by pathological considerations, there would be much less difficulty in ascertaining the relations between scrofula and pulmonary consumption. The reports of the Collective Investigation Committee have shown a preponderating testimony in favor of the view toward which the current of medical, as well as popular, opinion has been setting—the communicability of pulmonary consumption. Now after a period during which consumption seemed in a fair way of being considered to depend on anything but tubercle, we have come to the conviction that, broadly speaking, tubercle is the anatomical element of the malady. There is no doubt that a pathological product, not to be distinguished from tubercle, is met with in some scrofulous glands, and from this circumstance, if we dealt with disease simply as pathological anatomists, and not as physicians and surgeons, we should pronounce an opinion very favorable to the identity of the two affections, and state that an individual with a scrofulous gland and another with pulmonary consumption were alike the victims of tubercular disease, and although we would in doing this group together affections widely different as regards their gravity and prognosis, we would be acting on strict pathological lines. But when we examine another numerous class of strumous cases, those in which the eye and skin are affected in childhood, we find no evidence of tubercle whatever; indeed, in the progress and issue of the affections, decisive evidence that tubercle is not present at all, and accordingly we are able to convince ourselves, not only from this circumstance, but from the examination of many more advanced forms of these affections, that tubercle is not a necessary accompaniment of struma. Now, so much have the minds of pathologists been influenced by the occasional presence of tubercle in struma, that it has been broadly stated that consumption is a further stage of scrofula and that the two affections are identical, except in so far that scrofula represents an external and rudimentary form of the disease of which pulmonary phthisis is the more advanced and complete manifestation. At this point clinical observation has a right to enter and deliver a formal protest. Dealing simply with the facts which come under our notice we find in scrofula a condition most common in the young, although by no means exclusively confined to them; revealing itself by a variety of manifestations very chronic in their character, liable to be set up by trivial exciting causes, and remarkably prone to affect lymphatic structures. These phenomena are in the main capable of easy recognition, and form a clinical type which is evidently a natural one. They are evidences of a diathesis which makes those under its influence a class different from others in the vital endowments of their tissue. Of those who exhibit this diathesis in childhood, a considerable proportion grow up into fairly healthy men and women, capable of performing the duties of active life, and giving no palpable indications of disease. But they still show a certain vulnerability of tissue, and proneness to some chronic affections of the same kind, in fact a particular "cachet" which explains the anomalies in their vital reaction. Nothing can be a more legitimate and incontrovertible inference from the facts than that an individual may have been distinctly and markedly scrofulous, and yet never exhibit any indications of consumption.

On the other hand, of the consumptive patients who present themselves to a physician for advice about their lungs, a large proportion, estimated at about eighty or ninety in the hundred, have never had a history of scrofulous affections in childhood, and show no present evidence of the taint. It is quite exceptional to find a phthisical sufferer showing such indications. Clearly, then, an individual may become phthisical without being scrofulous, and considering the wide diffusion of struma and the great frequency of pulmonary consumption this seems decisive. In a recent able work on scrofula Mr. Treves has laid down the proposition, as the result of the observation of a great number of cases, that there is a decided antagonism between scrofulous diseases of all kinds, and that if a patient has one severe, or even well-marked manifestation of scrofula, he is not likely to develop another strumous disease at the same time. Contrast with this the well-known law of Louis, that the presence of tubercle in any organ after the age of fifteen involves as a necessity its existence in the lung, and we see how contradictory these assertions are if we depend altogether on the character of the product. The product known as tubercle has, after the age of fifteen, the property when present of causing the development of a similar morbid product in the other parts. Therefore, the tubercle found in scrofula in childhood has not the same relations to the system as the tubercle found after fifteen years of age. It is, of course, unnecessary to say that a lymphatic gland furnishes one of the easiest and most direct channels for the conveyance of infection into the system. Now this is not a mere question of terminology, for the attempt to unite different states on the basis of a common anatomical character invariably associates them in the mind as identical in all essential respects and is very misleading.

We ought to deal with the recent observations which point to the bacillus tuberculosis in the same spirit. When we are informed by Koch that he has found the same parasite in caseous bronchitis, caseous pneumonia, phthisical sputa, and in the hyperplasia of lymphatic glands, a clinical observer is justified in listening to these statements with the greatest interest, but with considerable reserve. He has a right to inquire how is it that an infective granuloma does not infect, and how is it that an enlarged lymphatic seems to demean itself in very much the same way, whether it is the seat of a simple chronic inflammatory process or of a new formation containing an intrusive organism profoundly dangerous to the economy and tending to invade one part of the system after another.

In fact, while we ought to welcome every new method of investigation, while we ought to do nothing to discourage the boldest flights of pathological speculation, to us the crucial test must always be the clinical one, the facts drawn from the direct observation of morbid processes during life. And in spite of any pathological generalization or anatomical induction we must hold rigidly to our clinical facts and decline to allow them to be warped or strained in the slightest degree.

Looking at the matter from the point of view of a practical physician, how different is the outlook as regards a young person brought to us with a strumous ophthalmia and enlarged glands in the neck and one of the same age with a little dulness and a few moist sounds in the apex of a lung. Is this wide difference in prognosis a question merely of a difference in seat of an identical pathological product? Is there not, as a rule, some antecedent condition which favors, if it does not determine, the appearance of the morbid state? Is it not a rare thing to find a phthisis beginning without, for example, a period of loss of appetite or indifferent health of some kind? Do I then wish to say that there is no connection between scrofula and consumption? I should not wish to be understood as making this statement.

There exists a certain kinship which makes the two conditions sometimes overlap, and there is some evidence that a hereditary tendency may sometimes be expressed in the one form and occasionally in the other.

It is proposed to inaugurate at this meeting a section devoted to pharmacology and therapeutics. The subjects embraced in this section have hitherto been scattered through different departments, but the increasing importance of their study justifies their being assigned to an independent section. The study of the action of drugs on the body both in health and in disease, and the study of all the means by which a disease may be mitigated or cured, form a necessary complement to the study of the disease itself, and even throw as much light on its nature.

In recent years the efforts in the direction of establishing rational therapeutics have been followed by great and encouraging success, while the search after specifics has disastrously failed. The study of antipyretics presents, in a striking light, the results of inquiry conducted in a strictly scientific method and spirit, and I am glad to find that one of the earliest discussions in the new section is to be devoted to this most valuable class of agents. New remedies of unquestionable power are being placed in our hands. It is impossible to read the account of the employment of kairin without being struck by its great efficacy in reducing temperature.

In recent therapeutics we find also an illustration of what I have before endeavored to show. In treating acute disease, it is, as a rule, the functional trouble that engages our attention and constitutes the aim of our therapeutic measures. Heat, delirium, circulatory or nutritive disturbance, adynamic symptoms—these are the conditions to which we direct our remedies. How comparatively rarely do we attack the tissue-change directly, and how comparatively inoperative are our therapeutic agents in this direction. It is true, of late years and since the investigations of Pasteur, that wider and more attractive possibilities have come into view, and the hope is entertained that agents may be placed in our hands which, without injuring the body, may prove incompatible with the life and development of some, at least, of the parasite organisms. That a particular salt promotes the growth of an organism, that another in even exceedingly minute quantity is fatal to it, gives some ground for the notion that it may be practicable to destroy some of these formidable enemies even within the body. Again, the methods of therapeutic research have been much improved.

The employment of the alkaloids or active principles of drugs in conducting experiments on their nature, instead of tinctures and powders of necessarily uncertain strength, has enabled a degree of accuracy to be obtained in estimating the effects produced which was formerly quite unattainable, and give additional scientific precision to the conclusions which are attained. For my own part, I regard every advance in therapeutics with great interest. The true dignity as well as the chief attraction in our studies lies in their practical utility. If our efforts were not quickened by something more than love of knowledge or scientific curiosity, the study of disease would be at best but a repulsive one.

"Res ipsa ornari negat contenta doceri."

No doubt there is an intellectual gratification of a high kind in contemplating a well-ordered field of knowledge where the divisions are clearly mapped out, and their relations, extent, and connections can be accurately understood. And it is also true that the study of medicine exercises a powerful and beneficial influence on the development and cultivation of the intellectual faculties.

It was said by Dugald Stewart that the study of medicine had an important influence on the development of one of the keenest intellects of modern times.

"No science could have been chosen more happily," he says, "to prepare such a mind as that of Locke for the prosecution of those speculations which have immortalized his name, the complicated and often equivocal phenomena of disease requiring in the observer a far greater portion of discriminating sagacity than those of physics properly so called; resembling in this respect much more nearly the phenomena about which metaphysics, ethics, and politics are concerned."

It is not possible that medicine should be cultivated on exactly the same lines as other sciences. In the first place, we are necessarily precluded from experiment; in the next place, we have but limited control over the subjects of our art. It was long ago pointed out by Bichat that pathology, the science of disease, has no exact analogue among the physical sciences. Physiology bears the same relation to living bodies that mechanics and the like do to inert matter. But there is no pathology of the physical sciences. We cannot suppose gravity to become deranged in its operations or chemical affinity as subject to morbid action. Nor can we suppose these forces are susceptible of remedies. Accordingly the processes of disease must be made the subject of investigations of a special character; to be conducted, certainly, according to the general principles which govern all scientific research, but not on the same lines or by the same method which other branches of inquiry demand. The study of life and its manifestations, of its beginnings and its endings, conveys the idea of effort, sometimes baffled, sometimes victorious, of an incessant struggle with its environment compared with which the physical forces seem types of serenity and calm.

Bacon advised physicians to raise their thoughts above common cases, and to turn them to prolonging and renewing the life of man. But, like much of the advice which men of great intellectual attainments have given to our profession, it only served to show that he had failed to recognize the essential conditions of our art. It is given to philosophers to generalize: to us the individual is everything. Aristotle and Seneca advised that, for the good of the race, delicate children should not be brought up. It is our duty to fan the puniest flicker of vitality and to preserve it from extinction as long as and as far as the most jealous care and solicitude can be effectual for the purpose. What the sick or suffering ask of us is, to have their pains and maladies mitigated or cured in the speediest and most effectual way. "Melius anceps remedium quam nullum" is a maxim which may not be a very wise one, but which certainly would fairly represent the desire of the great majority of the human race. There is deep truth in the saying of Bacon: "They be the least physicians which being learned incline to the traditions of experience, or being empirics incline to the method of learning," for it indicates that the physician should draw from all sources of knowledge alike. It used to be a reproach to physicians that they followed too implicitly the teaching of their masters and that they were unduly slow to accept new ideas; at the present day we are no longer liable to this reproach. One is almost inclined to suggest that even an undue haste is occasionally shown in adopting suggestions which rest on insufficient evidence or obser-

vation. It shows, however, a change in the habits and temper of mind which is in close accordance with the general spirit of the age. It is well that novel views should meet, as they are sure to do at our meetings, that rigorous and searching criticism which is the surest test of truth and which best proves its strength and vitality. It is one of the numerous advantages of a great association like this that different men may seek different services from its strength and organization. One regards especially its usefulness in bringing the weight and influence of a great profession to bear on public questions; another may value it for its beneficial influence on the status and relations of the members of the profession themselves; while others again attach more importance to its strictly scientific aspect, and desire that its resources and energy should be devoted to the encouragement of research, the fostering of investigation, and the general furthering of medical science. In the elasticity of its constitution, in the adaptability of its machinery, and in the independence of its branches, there is ample scope and abundant facility for the utilization of the varied energies of its members. In this respect it is no unfitting representative and exponent of the great profession out of which it springs. Called as we are to deal with the evils and mischances to which every form and variety of human activity are exposed, our points of contact with the public are well-nigh innumerable.

"Quidquid agunt homines," the worn-out limb, the jaded sense, the weary brain alike come under our ken. Every avenue of pleasure may become the portal for the ingress of pain. And so our studies embrace a vast and complicated range of subject, and give to medical science a wide and far-reaching scope of activity. And as it is now, so it has been and will be. When hygiene and preventive medicine have done their utmost, there will still be only too ample scope for the physician in dealing with the innumerable forms of human infirmity. The foundations of our art have been laid in antiquity beyond the reach of historical research; in this progress it has reflected innumerable aspects of human thought; its terms are the monuments of forgotten theories; to its storehouses of knowledge all civilized nations have brought their contributions.

It will be found that if in its course of development medicine has shared the errors and shortcomings inseparable from human progress, its advances have been in the main fairly abreast of those made in other branches of knowledge.

It is for us to maintain in our day the dignity and usefulness of a profession which has included in it so many good and famous men, and which has been for so many centuries among the foremost branches of intellectual activity.

Refusing to be Vaccinated.—There are persons here and there to be found who refuse to be vaccinated, and some of them give the ground of their refusal to be "principle." A person of this character appeared in an English court not long ago to answer the charge of refusing to allow his three-year-old child to be vaccinated. The magistrate fined him, although his action was stated to be "on principle." As the fine was not paid and could not be collected, the offender was sentenced to Portsmouth prison for fourteen days, but without hard labor. While in jail he was obliged to wear the criminal's garb, had to sleep on a plank bed, and was compelled to pick oakum. He wished to secure his own food, offering to pay for it, but the authorities declined to let him have anything except the ordinary prison fare. These facts were brought before the judge by his counsel, who contended that he was not an ordinary prisoner and should not be subjected to such treatment; but the court decided that the law had been broken, and that the offender could not claim any better treatment than any other prisoner.

PRACTICAL OBSERVATIONS ON THE HUMAN EAR AND ITS DISEASES, WITH ILLUSTRATIVE CASES.

By SAMUEL SEXTON, M.D.,

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I.—The External Ear.

(Continued from No. 718, p. 153.)

Sometimes it happens that the regressive stage runs on into a chronic condition, and the walls of the cyst fail to unite, or else a permanent sinus remains. Under these circumstances it will be necessary to *destroy the secreting surface of the cyst.* This may be accomplished either by the application of escharotics or irritants to the walls of the cyst, or by scraping them with the cutting instrument shown in Fig. 2. In regard to the selection of an irritant for this purpose, I have found none equal to a strong solution of iodine. The operation consists in making a tolerably free incision into the tumor, or in enlarging the sinus where one of small size exists, cleansing out the cavity, and then freely painting its surface with Churchill's solution of iodine. The walls of the tumor are afterward to be kept in contact by pressure. In my own experience, the injection of small quantities of the tincture of iodine into these tumors has proven to be temporizing and unsuccessful. Case II. is an example of the advantages of the method recommended above. When the operation already described fails, or for any reason seems inadvisable, the surface of the walls of the tumor may be abraded throughout with the fenestrated cutting scraper. This method, which was the suggestion of Dr. G. H. Fox, is preferable to escharotics, since the disorganization of tissue is entirely within the operator's control. This treatment was employed in Case III. Where any projecting edges or sharp folds of the cartilage prevent the walls coming together, they may, where the correcting of deformity is desired, be *extirpated by dissection.* This can readily be done by making a sufficient incision down into the outer surface of the auricle, and with knife and scissors removing the inequalities of the distorted cartilage. If thought advisable, the surfaces of the cavity may be afterward treated by painting with iodine or scraped. After the operation the walls should be kept in contact by bandaging (pressure). In the writer's experience, otoplastic operations can be performed with considerable freedom in these cases without fear of undue reactive inflammation, the wounds healing readily in the insane, even where low recuperative action might be expected to exist.

The occurrence of othæmatoma in the mentally sane is uncommon; a glance at the literature of the subject shows that it has been comparatively seldom the subject of observation among foreign writers, while American authors have thus far reported only some ten cases.[1] The writer ventures to introduce here a few illustrative cases occurring in his own practice, believing that an account of their behavior and management may be of interest in this connection, none of them having been hitherto reported.

Case XI.—A gentleman, forty-three years of age, a lawyer by profession, who had always been healthy, came to consult me on November 22, 1876, with the following history: On November 12, 1876, he discovered the presence of a small tumor on the upper and outer aspect of the left auricle. It gave him so little trouble that he did not consult his physician, Dr. W. C. West, of Monroe, Mich., until a week afterward. Dr. West then removed the small collection of serum which the tumor contained by aspiration. The effusion now increased

[1] Vide C. J. Blake: Statistical Rept. of 1,632 Cases of Diseases of the Ear, treated at the Mass. Ch. Eye and Ear Inf. during the year 1872; one case of othæmatoma—A. J. Otol., vol. iii., pp. 191-196. H. Knapp: Arch. Otol., vol. ix., pp. 195-202. Roosa: Trans. Am. Otol. Soc., vol. i., pp. 23-127. Kipp: Trans. A. O. Soc., vol. i., p. 79. Pomeroy: Ibid., vol. ii., pp. 83-86. Buck: Diagnosis and Treat. of Ear Diseases. Pooley: Medical Record, vol. xix., pp. 313-315.

more rapidly than before, and on the 21st of November the operation was repeated, the liquid withdrawn now being sero-sanguinolent. Urgent business at this time requiring the patient's presence in New York, he came to my office as stated above. The tumor was now found to be about the size of an olive, but thinner, and to have a purplish color. The distention was causing some discomfort, and half a drachm of bloody serum was evacuated by aspiration, after which the organ did not appear much larger than normal. The patient remained six days in New York, during which time there was but little change in his condition; the cyst was evacuated daily, and twice a few drops of tincture of iodine were injected, which increased the irritation somewhat —the auricle becoming slightly more swollen and tender to the touch, but receding again to its former state. While in New York the patient's business required much activity both of a physical and mental nature. Before leaving for home he recalled having *folded up the auricle upon itself by an accidental blow with his own hand while playing with one of his children a short time before he discovered the cyst.*

The patient left for his home on November 28th. He took a severe cold during the journey, and Dr. West found him, on his arrival the next day, suffering very much from the distention of the cyst, the contents of which were evacuated as before. On the 29th he was restless, the temperature going above 100°. A purgative and aconite were ordered, together with cooling lotions and gentle pressure. The latter, however, could not be borne. On the 30th the patient felt better, but the local trouble was extending, and now a colored spot was discovered on the back of the auricle. Iodine was injected into the cyst.

From this time on the patient continued to grow worse; the eyes became sensitive to light, and there were darting pains through the head. The inflammation extended itself to the parts above the ear; there was now effusion both in front of and back of the cartilage. Sedative doses of aconite were continued, and a laxative and quinine were given; an incision fully an inch in length was made, which laid the anterior aspect of the cyst freely open. The wound was then packed with lint soaked in carbolized oil. "The operation afforded immediate relief," says Dr. West, in his report of the case to me, "and in a few days there was an improvement in the symptoms." Tonics were then given. The patient was confined to his bed, however, during the month of December, and for the period of another month to the house. In May, 1877, the auricle was yet quite tender to the touch, and sensitive to draughts of air, although the parts had been for some time entirely healed. When the patient came to see me, in February, 1880, it was found that the auricle was considerably deformed, the superior portion of the cartilage being much contracted, the antihelix quite obliterated. In reviewing the case, it was evident that the long railway journey, the want of proper rest, and, above all, the cold contracted, made a severe case out of what would have been, perhaps, a mild one.

Case XII.—R. B——, a packer, forty years of age, came to the New York Eye and Ear Infirmary, August 2, 1877, with a small sanguineous tumor on the outer aspect of the left auricle, between the helix and antihelix, near the superior border. The tumor was of a deep red color, and slightly painful when handled. No urgent symptoms were present, and no subsequent visit was made.

Case XIII.—Ellen M——, a tailoress, aged twenty-seven, but looks much older. Came to the New York Eye and Ear Infirmary November 29, 1880. She is very intemperate, and the teeth are nearly eroded away by caries until they are about on a level with the gums. She states that one month ago the left ear was violently jerked by her husband, and that the next morning it swelled up and was of a very dark purple color. A day or two afterward the husband opened the swollen tissues with a blade of his pocket-knife. This operation increased the swelling, and a few days afterward a "doctor" laid the outer aspect of the tumor open with a lance. The cyst now became intensely swollen, and was as large as the patient's "fist." The husband then came home again in a drunken state and struck her on the

Fig. 7.

ear, causing a discharge of its contents to take place from the superior surface of the auricle. Flax-seed poultices were constantly applied to the ear during the attack. The posterior surface and the lobule were at no time affected. From the first the ear was for a while painful. For the past two weeks the swelling has diminished, but since yesterday it has again increased in size, the patient says "from the effects of taking cold in the ear." The tumor is now hard, and in size about one inch in thickness, and from above downward one and three-fourths of an inch in length. It is oval in shape; its outer surface is corrugated and somewhat resembles an almond that has been divested of its outer cortex. It is not sensitive to the touch, and in color is dark red, like the rest of the face and neck. Hearing is unaffected. The ears are naturally small. Fig. 7 shows the affected ear's appearance at the time of her first visit. The local treatment was expectant; internally the tincture of aconite root was ordered in small and frequently repeated doses. Rest and better personal hygiene recommended.

December 6th.—She comes to-day with a painful alveolar abscess at the root of the left upper central incisor tooth. Sent to the dentist to have tooth removed.

December 9th.—The left side of the face is much swollen from the presence of the alveolar abscess, which, however, is no longer painful. The ear is also without pain. Were it not for the unsightliness of the abscess and the painful mastication, the patient would not have returned to-day for treatment. She was not again seen.

Case XIV.—Mr. S——, a dry goods merchant, aged twenty-five, came to consult me on October 17, 1881. Two months previously he had received an injury to

the right ear by being jammed against a door while in a state of intoxication. Twelve hours afterward he experienced soreness of the auricle, which was limited to the upper part of the helix; this continued without observable swelling for six weeks. Two weeks ago he noticed that the outer aspect of the ear was "puffed out," and two days later an incision was made into it by a physician to whom he went at the time; there was an escape of sero-sanguinolent fluid, but by the next morning the incision had closed and the cyst had refilled. Two days later another physician was seen, who cut the parts open with scissors, and on the following day increased the size of the opening by making a crucial incision. It seems that these measures were not sufficient to prevent the filling and distention of the sac, and that five days before coming to me a "piece was cut out," and the cavity then packed with oakum. Subsequently efforts were made to bandage the ear to the head. The oakum was allowed to remain for three days, and the ear was then poulticed. When I first saw the case the auricle was very much enlarged, had an angry look, and was of a purplish color. (See Fig. 8.) It was not very tender to

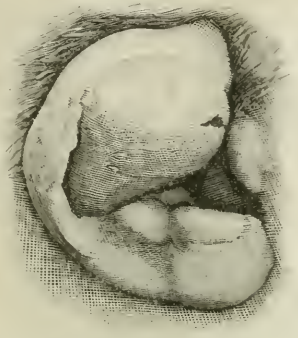


Fig. 8.

the touch. Hearing was unaffected. It was very evident that the patient was in a state of chronic alcoholism, and he was told that treatment would be almost unavailing unless he left off stimulants. The fluid which had again accumulated was now removed by aspiration, and it was determined to try pressure so soon as the necessary dressings could be borne. On October 19th, 21st, 23d, and 30th, improvement was uninterrupted; the fluid removed at each visit was found to be more and more thin and pale, and the quantity less and less. The ear was not so angry in appearance, the outlines of the helix began to show themselves, and the sac diminished in size. The tissues were, however, considerably infiltrated.

The patient now resumed his intemperate habits, with the result of exasperating very much the condition of the ear, the organ becoming much worse after each debauch. Being unable to improve his habits in this regard, the treatment was finally suspended before a cure was accomplished.

Remarks.—In reviewing the four cases above, and the writer's other two cases, viz., Case I. and Case VIII., before given, it will be convenient to arrange them in the following tabular form:

The Author's Cases of Othæmatoma in the Mentally Sane.

No.	Age.	Sex.	Occupation.	Ear affected.	Habits.	Causes.
1...	43	M.	Negro minstrel.	Right.	Temperate.	Trauma.
2...	35	M.	Gymnast.	Left.	Temperate.	Trauma.
3...	43	M.	Lawyer.	Left.	Temperate.	Trauma.
4...	40	M.	Packer.	Left.	Temperate.	Trauma(?).
5...	27	F.	Tailoress.	Left.	Intemperate.	Trauma.
6...	25	M.	Merchant.	Right.	Intemperate.	Trauma.

It will be seen that in five of these cases the cause was traumatic, the injury in one of them being slight. In one case the history in this regard is incomplete. Five were males and one was a female. Hearing was not impaired by the disease in any of them. Four of the patients were temperate and two were intemperate.

Of the ten cases reported by other American writers, the right ear was affected in four, the left in four, both in one, and in one case the side affected is not stated. It will thus be seen that of the sixteen cases occurring in this country, of which a full history is given, and including the writer's six cases, the left ear was most frequently affected. In nearly all of them there was a history of trauma, and where this factor was seemingly absent, as shown by the history, it appears that the parts about the external auditory canal were the seat of inflammatory action, or had been wounded in operative procedures (trauma) consisting of incisions into the cartilage.

One can well believe that "perichondritis" could extend itself from the cartilage of the canal to the pinna in such cases. Gruber mentions two cases where the trouble began in the cartilage of the canal.

Othæmatoma in the insane has its peculiar interest also, and it is believed that the following cases will prove instructive. They were placed under the writer's observation in the New York City Lunatic Asylum.

Case XV.—Female, aged thirty-two; under the care of Dr. E. E. Whitehorne. Has dementia, and is violent. On October 19, 1882, the left auricle suddenly became the seat of a hæmatomatous tumor the size of a pigeon's egg; it was of a dark purple color, and was situated on the outer surface. The swelling impinges on the concha, and occludes the external auditory meatus. Its progress was at first slow, remaining stationary for six weeks, when it again commenced to gradually increase in size without active inflammatory symptoms. There was fluctuation, but no pain; the skin was thickened, movable, and very much less discolored. Outline of helix remains, but antihelix, and fossa obliterated; meatus more free. The posterior surface of the auricle was unaffected. Self-inflicted injury, due to the long-continued practice of violently pressing the ears with her hands, had doubtlessly given rise to the trouble; it was with much difficulty that they were removed from the ears long enough to permit an examination of the parts being made. She always has numerous marks on the chest and elsewhere from self-inflicted injuries. The case progressed favorably from this time on, without any treatment, spontaneous recovery finally taking place.

Case XVI.—Eliza ——, aged thirty, admitted September 30, 1882, with acute melancholia; under the care of Dr. G. H. Gorham and Dr. H. A. Craig. On December 23d slight redness and swelling of the fossæ of the left auricle was observed, the inner surface of the organ being unaffected. On December 24th the concha was invaded, occluding the meatus, and the ear was poulticed. The tumor increased in size until the 28th, when it was as large as a hen's egg. It remained stationary, the poulticing being continued, until the 30th, when it was laid freely open by a horizontal incision, evacuating a blood-clot and bloody serum. The cavity, which was about one and a half inch long by one-half inch wide, was syringed out with carbolized water and afterward packed with oakum and balsam of Peru. December 31st a compress was applied. The outer surface of the auricle now presented a smooth convex surface; the topographical outlines of the cartilage were absent, the concha and lobule even being indistinguishable. The tragus was unaffected, but was in contact with the tumor. The swollen tissues were of a dark purple color. From the wound made by the incision there was constant and profuse oozing of sero-sanguinolent fluid, which trickled down the neck of the patient. The arms of the patient had to be confined to prevent further infliction of self-injury to the ear. Subsequently an abscess formed on the posterior surface of the auricle, and ruptured in that situation, the contents discharging from both anterior and posterior wounds. Gradual healing of the parts took

place during January, the walls of the cyst uniting and the abscess healing by granulation. February 24th ear completely healed. An examination in May showed the existence of considerable thickening in the superior portion of the auricle, with partial obliteration of the concha. The organ is not reduced in size apparently, although it has a shrivelled look, the outlines of the antihelix being distorted. The integument was not markedly adherent, and its color normal.

Case XVII.—Mrs. Barbara K——, aged forty, admitted July, 1883, with acute melancholia. Has delusion that devils are in her head, and hallucinations of hearing. To prevent devils "crawling" into her ears and to exclude annoying voices she thrusts foreign bodies, such as pebbles, rags, and the like, into her ears. On August 6th the whole right exterior ear was observed to be intensely hyperæmic, but not thickened. The meatus externus, however, was occluded by swelling of its walls, and a little pus was found on syringing out the canal. On the 8th the auricle was much more swollen, the markings becoming indistinct. Hot applications were made, and on the 9th pus flowed from the meatus freely. On the 13th it was observed that considerable purulent discharge was escaping from over the superior margin of the concha. Hot fomentations were employed, and the rupture healed by granulation about August 28th, leaving the cartilaginous portion of the external auditory canal occluded, the walls being in contact. The concha and fossa of the helix were obliterated and the tissues indurated; the auricle is greatly thickened and shrivelled. Hearing is unimpaired on this (right) side.

On August 11th the left ear was found to be inflamed also, and some dirt and a small piece of rag were removed; afterward pus escaped. The ear was then treated the same as the right had been. When the symptoms abated the auricle remained thickened, and the canal was much reduced in size. [The clinical history of this case was kindly furnished by Dr. Dent, Assistant Superintendent.]

It will be observed that in two of the above cases there were complications attended with suppuration; in one of them—Case XVI.—this was due probably to contusions of the parts during the progress of the othæmatoma, and in the other case (XVII.) the othæmatoma seems to have been caused by trauma and suppurative inflammation in the external auditory canal.

The treatment of contusions of the ears, of course, attracted the attention of ancient physicians. Thus Paulus Ægenita, in treating of these injuries, did not think any treatment required; since it was necessary, however, to do something, he recommended that a local application of myrrh, aloes, etc., be employed. Hippocrates found that some of these injuries were much more grave in their nature than others, and he seems not to have found their treatment satisfactory. He shows a want of faith in bandages or cataplasms, as he believed that they favored the formation of abscesses and established suppuration; the ear, indeed, seemed to stand in need of such applications less than any other part, and none were sometimes good treatment. When suppuration (effusion?) threatened, there need be haste in making an incision, for *often the matter* (?) *was absorbed again* [italics the writer's]. Were he forced to open it (the tumor?) he preferred transfixion with a cautery, since by means of this method the parts get well soonest, and yet it should be well understood that deformity will ensue and the ear be smaller than the other if thus burnt through. If an incision were decided on it should be freely made on the upper (outer?) side, for, he says, the pus (?) is found to be surrounded with a thicker covering than one would have supposed. After incisions, which may not always be followed by evacuation of mucus (serum?), cataplasms and pledgets are to be avoided. The true nature of othæmatoma was unknown in the time of Hippocrates, and in the treatment of the affection he was probably not aware that a separation of the perichondrium from the cartilage takes place, and that the detached surfaces supply the serum, which he wrongly believed to consist of mucus. The cases which have been given, occurring both in the mentally sane and in the insane, while showing that the affection is obnoxious to both classes, at the same time teach us that the trouble in the latter is subject to influences which usually render its management more difficult than in the former. In the treatment of othæmatoma in the insane it would be well to keep in mind that subsequently to the period of intensest local congestion there is very often, probably, a *decrease* in the temperature of the auricle, which may be due to more or less complete restoration of vaso-motor dominance, a condition scarcely distinguishable to the eye from active turgescence, although to the touch the parts are cold even. Opportunity to test this matter by thermometrical observations has not been afforded me, and I am therefore unable to state the exact degree of depression which probably exists. To pursue this topic further, however, would lead us too far.

Concluding remarks in regard to treatment.—One should not be in haste to interfere in these cases; in general it may be said that the dictum of Hippocrates, namely, that the employment of cataplasms and pledgets are to be avoided, is as safe a guide now as it was in his own day. But while excessive poulticing is to be avoided, there are probably some few cases where hot fomentations or light emollients of various kinds may, when judiciously applied, prove grateful in an auricle highly inflamed. As regards pledgets, however, their employment is always liable to do harm, since they give rise to undue irritation if employed early, and the distention produced by them later on, when thrust into the cyst, prevents the walls of the tumor coming together and adhering to each other. The employment of ointment has not, seemingly, been a favorite mode of treatment, but I have no doubt that belladonna ointment would be beneficial where the cutaneous circulation is languid. In the regressive stage I have found dilute tr. of arnica of service, as in other contusions.

Internally the fluid extract of aconite may be given in small and frequently repeated doses; four or five drops in half a glassful of water is a convenient form of employing the drug; of this mixture a teaspoonful may be given every hour or two, or oftener if required. I have seen throbbing in the tumor and local congestion diminish under this course.

Where suppurative processes arise, as they sometimes do, in the inner portion of the auricle, the postaural region, or contiguous to the cartilaginous canal, the calcium sulphide (Calx Sulphurata of the Pharmacopœia) is indicated.

That these patients should be kept quiet, and usually in a restful attitude, need not be dwelt on here. The self-infliction of further injury, or its production by others, among insane persons, should be prevented. Attention to general health, of course, must not be overlooked.

OTHÆMATOMA IN THE LOWER ANIMALS.

This form of disease is said to affect dogs, an account of its occurrence in whom has been given by Mr. S. Ogier Ward.[1] Wilde states that he observed the trouble in a valuable pointer. I have myself never seen a well-defined case of othæmatoma in a dog, unless isolated hard lumps in the pendant portion of the organ be such. It would seem that some shrinking of the auricle would be produced by perichondritis rather than the "lumps" alluded to by writers.

The cat, it would seem, is liable to othæmatoma, an example of which I was shown by my friend, Dr. E. G. Loring, some months ago. The animal (a male) which was the subject of the trouble was of the Angora strain, and was one year and a half old. He was a fine example of the kind, and, perhaps owing to high breeding, very excitable, not to say wild and uncontrollable.

[1] Loc. cit.

Over two weeks before I saw the case the entire inner surface of the left auricle was swollen out, the affected organ forming a long, pointed tumor. The effusion was gradually reabsorbed, and when the writer examined the ear afterward, it was smaller than the right one, and somewhat thickened and shrivelled. The presence of some cutaneous trouble in the post-auricular region and over the vertex was noted. The auricle had assumed its natural color. Subsequently to the above, Dr. Loring informed me, the right auricle was affected in the same way the left had been. There was no evidence of the auricle having been scratched. The animal has since run away.

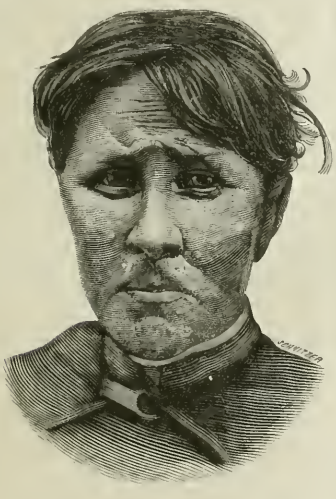
The writer has frequently examined the ears of pugilistic cats with ears deformed by lacerations produced by biting and scratching, but has never before met with an example where deformity characteristic of perichondritis existed.

A CASE OF INDIGENOUS LEPROSY.

By W. H. GEDDINGS, M.D.,

AIKEN, S. C.

Miss ——, twenty years of age, descended from an English family which has resided in South Carolina for several generations, was kindly referred to me for treatment by my friend, Dr. F. L. Parker, of Charleston, S. C. At the age of ten, while in the enjoyment of good health, a white spot appeared on the right leg immediately below the knee, about the size of a ten-cent piece, devoid of all sensation and not rising above the level of the skin.



Three months later a second spot appeared on the left elbow, presenting the same characters as the first, but surrounded by a brownish areola. Similar anæsthetic maculæ continued to appear during the first year of the disease over various parts of the trunk and extremities. During the succeeding year the skin became indurated in circumscribed patches of a dirty yellow or brownish color, and presenting a lardaceous appearance. Unlike the maculæ these infiltrations were not anæsthetic. Simultaneous with their development islets of yellowish pigment appeared over various portions of the integument, at first about the size of a lentil, but gradually enlarging and by confluence forming extensive patches. During the succeeding eight years she remained in about the same condition, but in February, 1882, hemispherical tubercles about the size of a split pea appeared over the face, especially over the eyebrows and chin.

Present condition.— Patient, who is well developed, presents a rather cachectic appearance. The skin, with the exception of a small area over the sternum, is everywhere of a dirty brownish-yellow color, while that over the sternum is abnormally white, presenting the appearance of ordinary leucopathia. The brownish discoloration is evidently due to excessive deposit of pigment, which, appearing as small spots, has gradually spread over the whole body. Over the face are a number of round tubercles of various sizes, the more mature being somewhat larger than a full-grown marrowfat pea. They are distributed over the whole face, but are much more numerous on the chin than elsewhere. On the forehead, especially over and above the eyebrows, may be seen the flattened remains of tubercles, which, according to the patient's statement, had disappeared during a recent attack of fever. These latter give the face the peculiar leonine expression so often observed in leprosy. The skin over the great toes and corresponding metatarsal bones is much swollen, of a dark, dusky red color, and is very painful.

Isolated cases of leprosy have been observed in Charleston and its vicinity for many years, the present being the latest of a series of twenty that have been brought to my notice during the past twenty-five years. This comprises only those cases that I have myself seen or which have been described to me by physicians familiar with the disease. Although more common among the whites, it is by no means confined to that race, one of the patients being a full-blooded negro and several of them mulattoes. Of the above cases four were Jews. In none of these cases was the disease hereditary, although in one instance a mother and her daughter were affected at the same time. In all these cases except the one just mentioned, there was not the slightest evidence of contagion, nor has it ever been deemed necessary to isolate those affected with the disease. When well enough they walk about the streets of the city, attracting but little attention, as the people know from experience that in this country they run no risk of contracting the disease by coming in contact with those affected with it. As isolated cases of leprosy have been observed on the coast of South Carolina for nearly forty years without any apparent increase in the number of cases, it may safely be inferred that there is but little danger that the disease will ever become endemic in this section.

FIBRO-CYST OF UTERUS WEIGHING ONE HUNDRED AND THIRTY-FIVE POUNDS.

By C. C. STOCKARD, M.D.,

COLUMBUS, MISS.

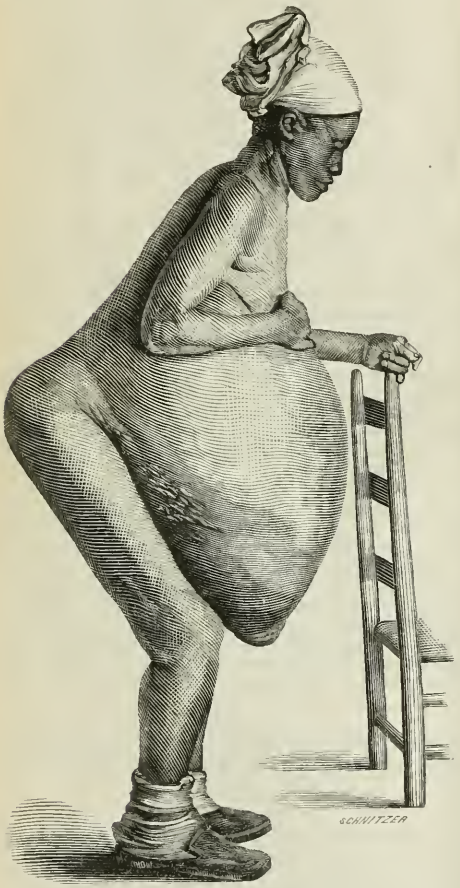
The following case presents some points of interest other than the size of the tumor, which, so far as I can learn, is the largest on record. It is especially interesting from a diagnostic point of view, inasmuch as the physical characteristics of the fluid contents were not those of fibro-cyst, according to Attlee, but were those of ovarian-cyst, according to Drysdale, the post-mortem showing the tumor to be the former.

The patient was a negro woman, aged about fifty years, who was the mother of several children, and had enjoyed good health up to the time of the development of the tumor.

Some twelve years ago, according to her statement, she first noticed a lump in the right iliac region. This continued to grow larger till about seven years ago, when she was seen by two of our physicians, who considered it a case of ascites and tapped her, drawing off several gallons of clear fluid. There was a reaccumulation, and the enlargement had reached its former size at the end of a year after the tapping.

A few years later, as the abdomen became greatly distended, there would occur about once each month an oozing from the right side of the abdomen below the navel, which would continue about a week, and during

this time sufficient fluid would escape to give her considerable relief. During all this time her general health continued good, and she did the work about her house, cooking, etc. Since February of this year there was no more of the oozing, and she suffered so from the distention that she had to give up work and could not get about without help. This was her condition when I was asked to see her on May 2d. I found her truly a wonderful sight.



The abdomen measured in its largest circumference sixty-eight inches, and from the ensiform cartilage to the umbilicus, twenty-seven inches—the navel being a little below the knees, as will be seen in the illustration. The skin in the neighborhood of the umbilicus was thickened, and resembled more the skin of an elephant than that of a human being. The umbilicus was about five inches in diameter and three inches long. Asking two confrères to see the case with me, we decided to tap, to give relief for a while, and the patient was anxious to be tapped. Accordingly, in company with Drs. Mayo, Vaughan, and Sykes, I proceeded to tap her at 2 P.M. May 6th. A few hours previous to this the photograph was taken.

With a many-tailed bandage around the abdomen in the usual way, the trocar was introduced about five inches above the umbilicus in the median line. Withdrawing the trocar from the canula a muddy chocolate-colored fluid flowed, a portion of which was preserved in a clean bottle for subsequent examination. After several gallons had discharged the fluid came quite slowly, and another trocar was introduced four or five inches higher up. From this puncture came a clear, slightly amber-colored fluid, which the patient said was like that drawn at the preceding tapping. After running from this canula some little time it ceased, and the canula being partially withdrawn was pushed into another cyst, which also discharged the clear fluid. After the flow stopped from the first canula introduced, it was withdrawn and inserted about six inches above the second.

The tapping lasted about two and one-half hours, and eight gallons and seven pints of fluid was withdrawn—a considerable amount remaining, which, with the solid part of the tumor, left the abdomen still quite large. Neither of the two kinds of fluid coagulated on standing, even for several days. The colored fluid had a specific gravity of 1.021, solidified on boiling, and under the microscope showed blood-corpuscles, granular masses, an abundance of beautiful cholesterine crystals, and what I considered to be the ovarian cells of Drysdale. Not being an expert with the microscope, however, I would not insist that the Drysdale cell was present, and I regret that I did not send a specimen of the fluid to Dr. Drysdale for examination.

The specific gravity of the clear fluid was 1.015. On adding nitric acid, a drop at a time, a coagulum the size of a drop would sink to the bottom till the whole solidified. This fluid contained also cholesterine crystals and the cells which I supposed to be ovarian.

The patient began coughing immediately, but with this exception was quite comfortable for a few days, when a profuse watery diarrhœa set in. This was checked, but she continued to grow weaker, till death occurred of exhaustion, on the sixth day after being tapped. For three days after the tapping fluid discharged from the points of puncture, saturating clothing and bedding several times.

Post-mortem examination was made two hours after death occurred, before there was rigor mortis. Incision through the abdominal wall and peritoneum showed a network of veins over the surface of the tumor, some of them so large that we took them at first glance for intestines adherent to the tumor. The tumor with the uterus and ovaries was removed and the abdominal incision was closed, as this was all that was agreed to by the family.

The liver was seen to be considerably enlarged—would have weighed, I suppose, eight pounds. The tumor was attached by a pedicle, about an inch in diameter, to the posterior portion of the fundus uteri, and around the pedicle the wall was some two and one-half or three inches thick, and got gradually thinner.

As Dr. Prudden, the Curator of the Museum of the College of Physicians and Surgeons, where the tumor now is, has promised to present it to the New York Pathological Society, I will leave a full description of it to him.

Besides the main tumor there was a fibroid in the uterine wall about three-fourths of an inch in diameter, a small polypus in the uterus, and a cystic tumor of left ovary. Besides these, Dr. Prudden writes me, there was in the left Fallopian tube an encapsulated fibroma, four millimetres in diameter, and a small cyst of the broad ligament. The solid portion of the tumor weighed fourteen pounds, and the fluid, weighed at the same time, twenty-four pounds, which, with the seventy-one pounds drawn at the tapping, make one hundred and eleven pounds. That which escaped after the tapping, with considerable that was lost during the post-mortem examination, at a low estimate, was three gallons, or twenty-four pounds; so that I feel confident the entire tumor with its contents, as it was before the tapping, would have weighed one hundred and thirty-five pounds or more.

The Lehigh Valley Medical Association will hold its annual meeting at Mauch Chunk, Pa., on August 19, 1884. Dr. Theophilus Parvin will deliver the annual address.

Reports of Hospitals.

PHILADELPHIA HOSPITAL.

Clinic of JAMES TYSON, M.D.

CHRONIC PARENCHYMATOUS NEPHRITIS.[1]

Gentlemen: Before giving you the history of this patient, I desire to call attention to some of the more salient points in his present condition. In the first place, I ask you to note the extraordinary pallor of his countenance and of his skin in general. This was even more marked when he was first admitted. Another symptom, which some of you may have noticed already, is œdema. There is a translucency of the skin which, even if you did not know that the limbs were larger than natural, would lead you to suspect that there was effusion into the subcutaneous connective tissue. This would be confirmed by the effect of pressure, which produces a deep pit, continuing for some time. This œdema affects the feet, legs, and thighs, and to a less extent the hands and face. It also affects the abdominal walls. While on this point I shall examine to see if there is any effusion into the peritoneal cavity. There is no fluctuation and no dulness on percussion. These two symptoms, pallor and œdema, are the only ones that are exhibited in a superficial examination.

The history which we have obtained from him is as follows: He is forty-two years of age; was born in Ireland, and has been employed around stables most of his life. He was admitted to the hospital on September 12, 1883. His family history seems to be good. He has been temperate, and has no history of venereal disease, having married early. He has been suffering from his present ailments for two years. In the commencement of it he caught a cold, followed by a little dry cough, which has since passed away. One year ago he noticed that he was swelling—his face, and subsequently the legs and body. This is significant, that, although he dates his present illness two years back, yet he did not notice the swelling until one year ago. Even then, although he did not feel well, he continued at his work. He suffered also from nausea, dizziness, and defective vision on admission, but these include all that is essential in his condition before admission. One more fact, however, should be stated. He had diphtheria in the beginning of his sickness. This may be of some importance in connection with the etiology of his disease.

As we have before seen, the most evident symptoms are pallor and swelling. The swelling began in the face and hands, and this fact suggests at once a cause for it. Given a case of general œdema, we find that it either begins in the lower extremities, in the face and upper extremities, or it begins in the abdominal cavity. These facts are cues to the place where we should first look for the disease. It may be laid down as a general rule that œdema, beginning in the lower extremities, is due to cardiac disease; beginning in the abdominal sac, to hepatic disease; and beginning in the face, to renal disease. This is not an inflexible rule, but it will often save time in the investigation of a case. Adopting this rule in the present case, we should expect to find the cause of the trouble in the kidneys. Hence an examination of the urine is suggested. The test I employ in your presence is the simplest, and under ordinary circumstances is sufficiently reliable; I boil the urine and add a little acid to dissolve any phosphates that may be precipitated. It will be found that the albumen will be precipitated at a lower temperature the greater the amount—that is, if there is large albuminuria the albumen will begin to fall at a lower temperature than if the amount is small. You observe that a copious precipitate has formed. It is scarcely likely that so large a deposit could be due to the presence of phosphates, yet I have known urine to be as opaque as this simply from the deposition of phosphates, so that it is never safe to omit the addition of an acid. This precipitate does not dissolve.

This, then, is a case of albuminuria as well as of dropsy, and a case of large albuminuria. Is this sufficient to show that there is renal disease? I believe that, except where there are evident quantities of blood or pus in the urine, there is no one of the various causes which produce albuminuria which will give such a large precipitate of albumen as we have here. I have no doubt, therefore, that this is a case of some form of Bright's disease. At the same time, it does not do to stop here. We are not satisfied to-day with simply learning that the patient has Bright's disease, but we desire to know what form of the disease he is suffering. We have examined this man's urine microscopically and found a large number of casts. These casts are of a peculiar kind, and through their age we are enabled to be absolutely certain as to the diagnosis.

As to casts, let me briefly call attention to what they are and how they are formed. They are molds of the uriniferous tubules, and are formed of an albuminous material which coagulates after it has been filtered from the blood-vessels into the tubules. This material having been poured out, entangles whatever it may find in the tubule. If the epithelial cells are loosely attached, these are embedded in the material. After a time, the cast shrinks and becomes smaller than the tubule, slips out and appears in the urine as an *epithelial cast*. If, on the other hand, the uriniferous tubule has its epithelium closely attached, the cast slips out, leaving behind the epithelial cells, and appears as *a hyaline cast of small diameter*. This is the most favorable form of casts, being found with the least departure from health, as in congestion. Again, it constantly happens that the tubule is entirely bereft of its epithelium, and then if the albuminous material is poured out its diameter is measured by that of the lumen of the tube plus twice the thickness of the epithelium cells. It slips out and we have *a hyaline cast of large diameter*. These occur in chronic forms of Bright's disease, where the epithelium is stripped off and we have an empty tube into which the material is poured. If, instead of the epithelial cells being loosely attached and slightly degenerated, there happens to be blood, as there often is, in acute inflammation of the kidney, these corpuscles are imbedded in the cast, forming a *blood-cast*. If the cells lining the tubule have undergone complete fatty degeneration and have become filled with fat-drops, or the degeneration has even gone further, so that the cells have broken down and free fat-drops and fatty cells become imbedded in the cast, it passes out in the form of a *fat- or oil-cast*. These of course indicate advanced degeneration of the kidney, or rather of the kidney-cells. This is the form of casts which we find in the present instance, and in addition to them, free oil-drops and fatty cells; these latter are evidently from the kidney. It is not always easy, and indeed it requires a considerable experience to recognize a renal cell which is slightly altered; but there is no cell from any other part of the genito-urinary tract which exhibits the characteristics of this fatty cell, so that when fatty cells and free oil-drops are found it may be concluded that they come from the kidneys.

These are the facts on which the diagnosis is based: the presence of œdema, which started in the face and hands; the existence of a large amount of albumen and fatty casts, and free fatty cells and fat-drops on microscopical examination.

In this case we are able to infer with considerable certainty, what is not always possible, the form of kidney disease present. This is a case of chronic parenchymatous nephritis. This means that the disease affects the parenchyma of the kidneys or the tubules—the essential secreting substance of the glands or the parenchyma, as

[1] A clinical lecture delivered at the Philadelphia Hospital, by James Tyson, M.D., one of the physicians to the hospital and Professor of General Pathology and Morbid Anatomy in the University of Pennsylvania.

distinguished from the blood-vessels and intertubular connective tissue. At the same time there is, strictly speaking, no such thing as chronic parenchymatous nephritis in the true etymological sense of the term. There is an acute parenchymatous nephritis, because there is an acute inflammation which in the beginning involves nothing but the uriniferous tubules. The acute disease, however, cannot continue long before the interstitial tissue becomes involved. This stage, I believe, has been reached in the patient before us, and in every instance of chronic parenchymatous nephritis. The more correct term would be diffuse nephritis, because we have involved not only the parenchyma and the proper secreting substance, but also the interstitial connective tissue, probably not excepting the adventitia of the blood-vessels. There are even some cases of acute catarrhal nephritis which are diffuse, in which it seems that simultaneously both elements of the kidneys are involved. On the other hand, there are cases in which the interstitial connective tissue is the starting-point of the disease, and the tubules are only secondarily involved. This is what is known as interstitial nephritis.

This, in a few words, is the morbid anatomy of this man's kidneys: They are large, pale, and very white. If the capsule is stripped off, there will probably still be found white points scattered over the surface of the organ. It is the size and color of this kidney that have given it the name of the large white kidney. This white color is due to two principal causes. In the first place, to the fact that many of the cells have undergone fatty degeneration, and, as you know, fat by reflected light gives a white color. The little white spots before mentioned indicate that in them the degeneration is more advanced. Tissue from these spots will show the uriniferous tubules filled with oil-drops, and no epithelium cells can be detected. In the second place, an important cause of the white color is the bloodlessness of the organ. The fatty degeneration of the cells is accompanied by an increase of their number, and the tubules become choked with them; and this with the overgrowth of connective tissue causes pressure of the blood-vessels, producing marked anæmia.

A word in regard to the etiology of this form of chronic parenchymatous nephritis and diffuse nephritis. The most frequent causes are scarlet fever and diphtheria, which produce the acute form, which is very prone to run into the chronic disease. Any of the infectious diseases may produce it. But it may also arise *de novo*. I have called attention to the fact that this man had diphtheria, but I stated that it was impossible to say whether or not this was the cause of the nephritis. We have no data to judge from. When we come to look for the causes of chronic parenchymatous nephritis arising *de novo*, they are not easily found. One of these causes is no doubt long exposure to malaria; not a brief exposure but the living for some time under the influence of a decided miasmatic influence. Exhausting diseases, like consumption, will also produce this affection. Formerly it was thought that the only form of kidney trouble resulting from exhausting disease was amyloid degeneration, but it is now known that these diseases often cause this form of Bright's disease. Another cause is perhaps long-continued exposure to cold and wet, especially if the feet are continuously wet. Acute inflammation of the kidney is frequently produced in this way. There are, however, many cases in which a cause cannot be discovered.

Given this condition, what is the prospect of recovery and what shall be done for the cure of the disease? This is a form of kidney disease in which very much can be accomplished by a judicious treatment. There is a most unfortunate popular error in regard to the prognosis of kidney disease. To most persons to be told that they have Bright's disease is, as it were, a death-knell; but I would much rather have renal disease than have consumption. The prospect of cure is more reasonable, while the disease is less unpleasant to other people. The popular notion that kidney disease is incurable is erroneous. Some cases cannot be cured, but many of these could have been, had they come under treatment earlier. There is an important fact in the pathology, on which improvement in this disease depends. The large white kidney sooner or later undergoes contraction, from the contraction of the interstitial connective tissue, and this is a favorable change. Of course this is not recovery. It is really going on to a form of renal disease in which recovery is less likely to occur, but it is a condition more compatible with life. In chronic parenchymatous nephritis the urine is diminished in quantity and of low specific gravity. When contraction takes place the urine increases in quantity, although the specific gravity may still remain low; the amount of albumen diminishes and all the symptoms assume a more favorable character. If a case has lasted a long time, we look for this method of improvement rather than a cure by removal of the diseased tubules and the overgrown connective tissue.

What is the proper *treatment?* There is one thing that must be done immediately, that is to put the patient to bed. You cannot expect any improvement, except in rare instances, unless the patient is put to bed. If this is done the patient, often in the course of a few days, assumes a better appearance, the albumen diminishes, and the appetite improves. Whatever else is done will depend upon the symptoms. If there is dropsy, it should be removed. A diuretic will probably be required. The best diuretic in these cases is digitalis. It may be given in the form of powder, infusion, or tincture. The infusion has the reputation of being the best form, and it is probably a good one, but not better than the freshly prepared tincture. The reason that the infusion seems to act better than the other preparations, is probably because it is given in so much larger doses. It is not infrequent to hear of a tablespoonful of the infusion being given, while only one grain of the powder or ten drops of the tincture are prescribed. A tablespoonful of the infusion is equivalent to three and three-fourths grains of digitalis, while fifteen drops of the tincture are equivalent to one grain of the powder. When I began to practice medicine, five drops of the tincture three times a day was the universal dose. I very rarely begin with a less dose than fifteen drops of the tincture, or one grain of the powder three or four times a day for an adult. If I use a smaller dose it is on account of the sensitiveness of the stomach. In determining the dose of digitalis and of other remedies, I am influenced to a certain extent by the size of the patient. There is no doubt that a man weighing three hundred pounds requires a larger dose than one who weighs only one hundred and fifty pounds, for the same reason that an ox or a horse requires a larger dose than a man.

I ordered this patient fifteen drops of the tincture of digitalis, four times a day, but the improvement was not rapid. The nausea was not increased, but the dropsy did not lessen. I felt that something more was necessary. I therefore gave him a jaborandi sweat, which is often a most valuable measure in this disease. A favorite method of administering jaborandi in this house is by enema. To an infusion of two drachms of the powdered leaves a pint of hot water is added. Of this one-half is first injected into the bowel, the remainder in half an hour, if sweating does not occur earlier. The lower bowel is very tolerant of the drug, and the stomach is thus saved, although the infusion may also be administered by the stomach. In this case the sweat was most successful. Not only were the bedclothes saturated, but large amounts of water also came from the mouth. Occasionally the bowels are acted on and the urine increases in quantity. After this single sweating, the dropsy diminished more rapidly; the urine increased in quantity. When first admitted, the proportion of albumen was one-half the bulk of the urine. It is now

hardly half. Often the albumen does not begin to disappear with the improvement in the other symptoms. In regard to other means of giving jarborandi, when patients are comatose or in convulsions, it must either be given by injection into the bowel or hypodermically, in the form of the active principle, pilocarpin. The latter is really the most elegant method. One-fourth to one-half a grain will usually produce the desired result. I generally give one-fourth of a grain, and if the patient does not sweat in fifteen minutes repeat the dose. If the symptoms are urgent, I sometimes give half a grain at the first dose. Another good remedy is the fluid extract in doses of a teaspoonful every half hour until sweating is produced. Sometimes only one sweat is required, sometimes it has to be repeated every other day or once a week. Jaborandi does have the effect of producing a feeling of prostration. But I have never seen any harmful results. Some writers have laid a great deal more stress on this point than I think it deserves. I think that the prostration is due only to the drain from the system and not to any specific effect. It is the prostration which follows any form of sweating.

Often the digitalis, which has previously failed to act, will immediately show its effects after a jaborandi sweat. The amount of serous effusion is sometimes so great that the vessels are so pressed upon that they cannot absorb. The patient sweats, the pressure is removed from the blood-vessels, and the remedy taken into the system. The same thing follows another mode of treatment which is often valuable—purgation. It is sometimes necessary to clear out the bowels before diuretics will act. For this purpose elaterium is often selected, because it has the property of producing watery stools. It may be given in doses of from one-tenth to one-sixth of a grain. Blood-letting acts in the same way. I recollect a case which occurred in my wards several years ago. A patient had been receiving large doses of digitalis which had failed to act. For some reason in my absence the resident physician bled the man. The digitalis immediately began to act; in half an hour the pulse was down to forty per minute. It would seem as though the medicine had lain away somewhere, either unabsorbed or inactive. While speaking of blood-letting, let me say that in the coma or convulsions of Bright's disease, blood-letting is often of decided benefit. I sometimes employ this remedy, and I believe it would be well to employ it more frequently.

There are other measures to be employed to improve the quality of the blood and counteract the effect of the disease on the system. As soon as the stomach will admit it the patient should receive iron in full doses. The best preparations are those in which the iron is combined with a vegetable acid, as the citrate, tartrate, and acetate of iron. The well known Basham's mixture contains the acetate of iron. The solution of the acetate of iron is now officinal, but it may be prepared according to the following formula :

℞. Tinct. ferri chloridi..... ʒ ij.
Ac. acet. destillat..... ʒ ij.
Curaçoæ..... f ʒ j.
Liquor ammoniæ acetatis..... ad ʒ vj.
Misce.

The dose of this is a tablespoonful.

Easily assimilable food should be given. One of the best forms of food is milk, but its use is not so important in this disease as in interstitial nephritis. The milk should not be too rich. A poor milk or skim milk is more suitable ; too much nitrogenous matter must not be given. There is no doubt that an excess of nitrogenous food is hurtful in all forms of Bright's disease. We now know that the urea is derived almost entirely from the food which is eaten. The old view was that it was the result of the wear and tear on the tissues. But just as the ashes of a steam-engine are derived from the fuel put into the fire-box, so is the urea derived from the food placed in the stomach. Eggs are not suitable food for cases of Bright's disease, nor is butcher's meat. I would not exclude animal food altogether. Oysters, fish, white meat, and game may be allowed. In reference to eggs, there is no doubt that too much albumen in the blood is irritating to the kidneys. It has been proven by experiment that when large amounts of albumen are injected into the blood, the amount of albumen excreted exceeds that which was introduced. This shows that something more must have been added, and this must have come from the blood. Highly albuminous food should therefore not be given.

An interesting question is as to the cause of the anæmia. The common impression is that it is due to the drain of the albumen from the blood ; but the fact is that the quantity of albumen excreted, even in large albuminuria, is very small ; and while it may contribute a little to the anæmia, its effect must be very slight. The amount of albumen passed in the urine throughout a week would be made up by that contained in one pound of beef. In fact the anæmia is partly due to insufficient assimilable food. There is often nausea which prevents the patient from taking a sufficient amount of food. It must be admitted, however, that the loss from the blood contributes somewhat to the effect. Albuminuric patients should be clothed in woollen garments, because they are peculiarly sensitive to cold.

It sometimes happens that the patients get well up to a certain point. The dropsy passes away and all the symptoms except the albuminuria disappear. The question now arises, Is there anything which will directly influence the quantity of albumen ? I do not believe that there is anything that will do this except the gradual relief of the circulation. I have tried astringents, tannic and gallic acid, and the astringent salts of iron, but without benefit. Benzoic acid has been recommended. Fuchsin, one of the aniline dyes, has been said to act in this way. I have given it until the secretions were stained by it, but without any effect in diminishing albuminuria. These things get their reputation in cases in which relief has followed after their administration as a matter of coincidence rather than as a result. Thus a pregnant woman has albuminuria, and immediately after the birth of the child the quantity of urine increases and the albumen diminishes. If benzoic acid or some other drug was being taken at this time, a careless observer would be likely to attribute the improvement to the drug. The only way to influence these albuminurias is to improve the circulation in the kidneys, and this occurs gradually through the restorative powers of nature, aided by such adjuncts as the physician can bring to bear. A method which I have lately used to a considerable extent, and with some success, is the use of gentle but persistent counter-irritation over the region of the kidney, drawing the blood to the surface into the branches of the lumbar arteries which connect with the renal arteries. It is not easy to produce gentle and persistent counter-irritation. The only way in which I have been able to do this has been by means of weak mustard plasters, prepared with molasses or white of egg. Made in this way the plaster does not burn so much and may be worn constantly, or nearly so ; for this is necessary, that the irritation should be persistent. Under this treatment the albumen gradually diminishes and sometimes disappears altogether, when all other measures fail to influence it.

Unusual Susceptibility to Small-pox and Vaccine.—Dr. W. Thornton Parker, of Fort Union, N. M., writes : "Among the recruits lately arrived at this post is a man who was vaccinated successfully when two years of age. Soon afterward he contracted small-pox, and in May of this year was again successfully vaccinated.".

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THE INTERNATIONAL MEDICAL CONGRESS.

CABLE despatches up to the hour of our going to press state that the eighth session of the International Medical Congress was formally opened on Sunday, August 10th, at Copenhagen, Denmark, by the President, Professor Panum, of Copenhagen, who delivered an address of welcome to the members, the King and Queen of Denmark, the Council of State, and the King and Queen of Greece being present. The attendance was large, comprising over three hundred Danes, one hundred Swedes, about one hundred Norwegians, and nearly eleven hundred medical men of other nationalities. America was fairly represented, as was also Great Britain, France giving the larger proportion of the latter number.

The scientific work of the association was duly inaugurated on Monday and was divided into that of general sessions and meetings of sections. Considering the amount of material announced and the lack of an understanding as to a definite programme of proceedings, there was at first considerable difficulty in settling upon a systematic arrangement and order of subjects; but the sessions, general and special, as will be seen, were kept well employed and were well attended.

It is impracticable at this stage of the proceedings to give a full account of the doings of the Congress, it being still in session as we write, but the accounts received thus far show how much of strictly scientific work was done. In our next issue we hope to publish still fuller cable despatches, with such addresses received as shall be deemed interesting to our readers. Our arrangements with our correspondent at Copenhagen are as perfect to this end as has been possible to make them, and we trust to our ability in giving the earliest authentic accounts of the work of the Congress obtainable on this side of the Atlantic.

It has been announced that the session will close on Saturday, after a full week of work, and we have reason to expect that the summarized results will be of sufficient interest to our readers to warrant the necessary pecuniary outlay for cable despatches necessary to the fulfilment of our promise.

It is quite probable that the next congress will be held in America, as the invitation on behalf of the medical profession here through the American Medical Association has been favorably received, and will doubtless be acted upon accordingly. No definite action has yet been decided upon up to our present advices.

THE DOCTOR IN FICTION.

IT is to be presumed that doctors are gratified to find that novel-writers have of late taken them up so largely. Few of the more prominent novelists have now left us untouched. The late Mr. Charles Reade has recorded the wonderful deeds of a medical woman, in order to prove to the dull-eyed public that medicine was an art in which the gentler sex could shine. Mr. Howells has introduced his "Dr. Breen," and has therein shown that the general tendency of women, however medically inclined, is to collapse on the matrimonial rock. Miss Phelps some time ago tried to portray an impossible creature who was called "Dr. Zay." She was described as being lovely, scientific, and homœopathic. By virtue of the first two qualities she cured a patient, and subsequently became his wife. We do not know what lesson Miss Phelps sought to inculcate—if any; but it strikes us that to try and make something heroic out of that last outrage upon common-sense—a homœopathic woman—is a great waste of talent.

Mr. Henry James has given an excellent portrait of a New York fashionable physician, in his "Washington Square." More recently he has been marrying a young American doctor to "Lady Barbarina," the daughter of an English peer, and showing the effects of the union of American medicine with English aristocracy. The result is not a happy one to the contracting parties, and the young doctor is obliged to take down his sign, give up his researches into cerebro-spinal meningitis, and live in London with his mother-in-law. We are informed incidentally of the peculiar absence of social position which the average English doctor is accorded by his hereditary legislators.

We cannot say whether Mr. Cable, in his "Dr. Sevier," is writing a novel which is to solve some social problem or simply to portray a unique character. Doubtless our Louisiana colleagues can better appreciate his work.

In a recently published novel, entitled "A Country Doctor," Miss Jewett brings up again the question of women and the study of medicine. It must be confessed that her novel, though somewhat prolix, deals with the subject at issue in a way that commands respect. Her heroine is a young woman who is brought up under the tutelage of a "country doctor," himself a charmingly and truthfully drawn character. She feels as she grows up that she possesses an especial fitness for practising medicine, and an overwhelming certainty that she is not like other women. She wants to practise medicine, not to be a wife and mother. Her trial comes when she falls in love with a not over-brilliant young man. After a hard struggle she gives him up, and makes the Hippocratic oath have something of the significance of a conventual vow.

It is not improbable that there are some such women as Miss Jewett portrays, women who have a certain instinctive aptitude for making sick people feel better, and who can follow out this aptitude better as doctors than as nurses. Their number is naturally very small. In "A Country Doctor" their feelings and ambitions are well shown. Here is none of the namby-pamby transcendentalism, the globules and matrimony of "Dr. Zay."

THE PATHOLOGY OF OBESITY.

PROFESSOR EBSTEIN'S monograph upon the treatment of corpulence has excited a large amount of attention from the medical profession, and has called forth a considerable number of articles upon the same subject. American physicians do not meet so many cases of obesity as do their European *confrères*. Nevertheless, the disease exists here, and it will be worth while for our readers to keep themselves acquainted with the progress made in our knowledge regarding it. Probably most physicians who have tried to reduce obesity by prescribing the regulation anti-fat diet have been disappointed. Doubtless this is often the fault of the patient or the environment; but one cannot resist the conclusion that, aside from all extraneous considerations, anti-fat diets and Bantingism generally are often inherently inefficient. The very fact that Ebstein's work has been so eagerly read points to this same conclusion. Ebstein has certainly furnished the profession with some valuable and practical hints in this direction. But it is yet too soon to say that his new diet of fat and nitrogenous food is to be any more successful than earlier ones. We have already expressed the opinion that theoretically it has but feeble support, while, practically, it is known that Voit has actually fattened animals with fatty and nitrogenous food. Leaving this question for the future to decide, therefore, we would now call attention to an interesting review of the subject of obesity, or morbidly great corpulence, which Professor Kisch, of Prague, has recently contributed to the *Deutsche Medizinal Zeitung*.

In normal conditions there is a tendency for the deposit of fat in the connective tissue of certain regions, such as the subcutaneous tissue—especially of the abdomen and buttocks—also in the mesentery, omentum, regio pubis, beneath the pericardium, about the large vessels—especially the renal vessels—in the orbit, etc. On the other hand, there are a few places where fat is never present, as for example in the lids and the male sexual organs. The estimates of the normal amount of fat in the adult vary greatly. Kisch gives it as one-twentieth the weight of man and one-sixteenth the weight of woman. This normal amount reaches its height in men at the age of forty, in women at the age of fifty.

The influences which produce obesity are numerous, and the endeavor of Ebstein to reduce them in most cases simply to errors of diet and exercise will hardly succeed. Obesity not unfrequently attacks children before puberty, being the expression of anæmia, chlorosis, faulty living, and heredity. But it is generally at a later age that the trouble comes on. It is, no doubt, a fact that a full diet containing an excess of non-nitrogenous food, the use of alcohol, and sedentary habits are the most frequent exciting, if not primary, causes of obesity. As we have said before, the question whether fat is a pathogenetic factor in producing fatness must, in view of Ebstein's positive statements, remain for the present unsettled.

Women are more subject to obesity than men, a fact that is easily explained in view of their more sedentary life, their inclination to non-nitrogenous foods, and perhaps to the lesser activity of their sexual life. For it seems quite certain that the active exercise of the sexual function is an element in preventing accumulation of fat. We ought to mention, however, that Professor Ebstein discredits this—and the Professor has been obese himself if we are rightly informed.

There is a certain tendency to corpulence which is racial. Among the English and Germans there are more fat men and women than among the Celtic, Gallic, Latin, or American races. The Bushmen and South Sea Islanders are inclined to take on fat, while the North American Indian is proverbially fatless. In Mr. Herbert Spencer's Social Statics are many interesting facts concerning this racial obesity or leanness.

Most of the stories regarding excessively fat people are exaggerations. The fattest person whom Kisch has ever seen weighed only 385 pounds. The celebrated Daniel Lambert is credited with weighing 52 stone 11 pounds. A man named Ed. Bright is quoted by Dr. Copeland as weighing 608 pounds. Erchenmayer cites the case of a girl, ten years of age, who weighed 219 pounds. Most of the Dime Museum fat people weigh considerably under 400 pounds, and it is very doubtful if that limit is often exceeded by human beings of ordinary height.

According to Toldt, connective-tissue cells and adipose-tissue cells are not identical. Toldt believes that adipose tissue is a special fat organ, having a separate and well-characterized set of blood-vessels and an independent nutrition-process which results in the manufacture of fat. Some physiologists look upon adipose tissue as a distinct metabolic organ, and Toldt's view has certainly much in its favor. According to it, we must suppose obesity an abnormal activity on the part of true fatty tissue, combined with a morbid taking on of the fat-making function by ordinary connective tissue.

The pathological changes and the consequent functional disturbances in obesity are of much interest. Professor Kisch has investigated this subject, and contributes some original observations to it.

First, as regards the heart, an organ which is inclined early to show signs of disturbed action. The fatty heart, as distinguished from the fattily degenerated heart, is affected, according to Leyden, in three degrees of severity. In the first there is simply a thick layer of adipose about the organ; in the second, with the fatty deposit there is a softening or relaxation of the muscles, dilatation of the cavities, and enfeeblement of action. In the third form there is combined with the fatty heart an arterial sclerosis. The symptoms in the higher grades of fatty heart resemble considerably those of fatty degeneration, and need not be here enumerated. Kisch has made sphygmographic tracings in four hundred cases of fatty heart with the following result: In thirty-six per cent. of cases there was a *pulsus tardus*; in thirty-two per cent. of cases the pulse varied from one of a slightly to one of a completely dicrotic character; in twenty-four per cent. of cases an increase of tension from arterial sclerosis was shown; in four per cent. of cases there was simple arythmia. The value of these examinations is, of course, slight of themselves. It is to be assumed, though it is not stated, that the patients had no valvular disease of the heart and no kidney lesions.

As regards the respiratory organs, Kisch found in many cases bronchial catarrhs. Naturally such symptoms as dyspnœa, and even pseudo-angina, were frequent.

The digestive organs of the obese are very likely to be deranged. Gastro-intestinal catarrh, dyspepsia, constipation, hemorrhoids are present, and are due partly to dietetic errors, partly to the weakness of the heart and the incapacity or disinclination on the part of the patient to take sufficient exercise. An enlarged and fatty liver is of frequent occurrence, but its existence is not easy to make out by physical examination.

Urates, uric acid, and oxalate of lime are found in the urine. It is well known also that the obese are liable to glycosuria, and Kisch found sugar in the urine of many of his patients at periodic or irregular intervals.

Owing to the increased activity both of the sweat and the sebaceous glands, fat persons are subject to "catching cold" and to attacks of rheumatism. Such skin diseases as boils and carbuncles are relatively frequent.

The bodily temperature shows an inclination to mount up, and in fevers the corpulent burn actively. Their feebler resistance to fevers was first pointed out by Hippocrates. Liebermeister states that they are less amenable to antipyretic measures.

Parallel with increase of fat is a decrease of sexual appetite and sexual power. Kisch found in several cases absolute azoospermia. Women are inclined to amenorrhœa and sterility. Among 215 obese women Kisch found 49 cases of amenorrhœa, 119 of scanty menstruation, and 49 of sterility.

The blood of the obese is poor in red blood-corpuscles. Obesity is, in fact, a disease of diminished and perverted oxidation. There are not only too few red corpuscles, but there is too much water and an excess of fat.

THE EXTRACTION OF FOREIGN BODIES FROM THE BLADDER.

As a general rule, persons who have foreign bodies in their bladders do not apply for surgical relief until some time has elapsed. In many cases this is doubtless due to the fact that they at first suffer but little pain; after a time, however, the foreign body causes cystitis, is covered with layers of phosphates, gradually increases in size, and becomes a source of constant irritation and discomfort to its host. The conditions, therefore, of surgical intervention are widely different according as the foreign body is recent or old. In either case, extraction *per vias naturales* may be very difficult; but it is evident that an old foreign body, which has become the nucleus of a secondary calculus, is peculiarly interesting from the difficulties which it offers.

For a long time it was supposed that a lithotomy operation was imperatively demanded. It is possible, however, to remove it otherwise by two operations: At the first the calculus is crushed by the lithotrite; at the second the foreign body is extracted in its primary condition. Guiard (*Ann. des Mal. Genito-Urin.*, April, 1884) has recently removed a large calculus, the nucleus of which was a hair-pin, from the female bladder by two operations, with very slight inconvenience to the patient. And Dr. Heuriet has recently read a paper, before the Société de Chirurgie, on the application of lithotrity to foreign-body calculi.

As regards recent bodies, their nature, consistence, and form are of importance, and very variable; and these are especially difficult data to obtain, for the reason that patients seem to delight in deceiving the surgeon in all genito-urinary matters. If the body is flexible, as a gum catheter, it may be cut or bent double and drawn out, unless too large for the urethra. If of iron or wood the lithotrite is useless; if friable it may be broken up and taken out piecemeal. Civiale recommended a special instrument for cutting up the foreign body, and then leaving its removal to nature. But while this process might be successful in some instances, there are too many probabilities that some of the pieces may remain to give further trouble.

Removal *per urethram*, then, while often difficult, merits, by reason of its great importance, serious attention. The surgeon should know in what part of the bladder the body is situated, and in what position he can secure it. Heuriet has shown by actual experiment upon the cadaver, that these foreign bodies are governed by what he calls laws of accommodation, as is the fœtus in utero, with, of course, the exception of rounded bodies. From his experiments Heuriet drew the following conclusions: 1. The transverse diameter of the bladder is the most constant; it is the only diameter which persists when the viscus is completely empty, and which, in that state, furnishes a resting-place for foreign bodies, provided they are not above a certain size. 2. As the bladder becomes distended, other diameters are formed and it tends to become spherical. Its transverse diameter then attains its maximum, which is 10 ctm. or more (4 inches). Its vertical diameter continues to increase and may attain excessive dimensions. 3. The maximum of the transverse diameter is almost at an equal distance from the summit of the bladder, whatever may be its development, and the cervical region perhaps a little nearer to the latter. 4. Foreign bodies, quite rigid, and 12 ctm. (4.2 inches) long, can only lodge completely in a distended bladder, and in a vertical or oblique diameter. 5. Bodies 6 or 8 ctm. (2.4 to 3.2 inches) long generally assume a transverse position. It is only when the bladder is full and considerably distended that they may take a vertical or oblique position, or rest on one extremity in the region of the neck. When they have a transverse position they may float, provided their specific gravity and the amount of vesical dilatation permit; but hollow bodies, such as a piece of catheter, almost always remain at the base.

The transverse diameter, therefore, is that which varies least, whatever may be the state of distention of the bladder, being smallest when the bladder is distended and greatest when it is empty. These peculiarities have a remarkable influence on the direction which foreign bodies take, and we know *a priori* that they tend to assume a transverse position. On entering the bladder from the urethra they are situated in an antero-posterior median plane. But after micturition the antero-posterior and vertical diameters are effaced, and the body changes its position; its posterior extremity receives an impulse from the corresponding wall of the bladder which tends to approach the neck. This impulse moves the anterior extremity from the median line, where it was at first, toward the right or left, on account of the persistence of the transverse diameter. At the same time, as the bladder contracts, the posterior extremity is pushed forward by the diminution of the antero-posterior, and

downward, by the diminution of the vertical diameter. Thus the transverse diameter is the only one which the body can assume when the bladder is empty. It may, therefore, be laid down as a rule that *rigid* and *elongated* foreign bodies tend to assume a *transverse* position. But if their dimensions exceed 6 or 8 ctm. they cannot rest in this position, but must lie obliquely.

Those accustomed to vesical manipulations know that the contractions of this organ commence by a raising up of the posterior face and floor. These parts seem to advance toward the neck, leaving two prolongations on each side, which subsequently approach the neck. The neck is the fixed point and all other parts contract toward it, and the diminution of the capacity of the bladder commences by shortening of the antero-posterior diameter, which is followed by shortening of the vertical diameter.

The elevation of the floor of the bladder is a very essential point in enabling the surgeon to grasp a fragment. In cases of enlarged prostate great difficulty may be encountered until the bladder commences to contract, raising the base and thus bringing the body within reach of the instrument. In searching for a body in an empty bladder, it may be impossible to move the instrument save in a lateral direction, and if this cannot be done the operator may be sure that the bladder has not been entered. When, however, the bladder is distended, as by an injection, these conditions immediately change. The foreign body becomes movable, and its position is no longer regulated by physiological but by physical laws. The case is analogous to the state of hydramnios in the pregnant woman. The fœtus simply floats about and has not stable position. Distention of the bladder by injection, therefore, so far from favoring the search for and extraction of the body, really hinders these manœuvres.

News of the Week.

Life !—Dr. S. W. Francis' latest definition is—*Can : Can-Can : Can't !*

The American Dental Association held its annual meeting in Saratoga last week.

Quarantine at New Orleans has been reduced from forty to ten days for ships from infected ports.

The State Board of Health of Kentucky has issued a circular of instructions regarding the prevention of cholera.

Fatal Accident to a Medical Student.—Another fatal accident has occurred in the Alps, the victim being a medical student, son of Professor Bamberger, of Vienna.

Another Grave-robbery near Philadelphia.—Two men, one of them a Dr. J. B. Weider, of Philadelphia, have recently been arrested for grave-robbery at Norristown.

Popularity of the London Health Exhibition.—Upward of one and a-half million have visited the International Health Exhibition during the two months it has been open to the public.

Lepers Returned to China.—The authorities of the city of San Francisco have sent back to China nineteen Chinese lepers, paying their passage and giving each one $5. Nineteen cases lost to science.

The Cholera in the United States.—The probabilities are that the present European epidemic will not be a severe one, and that the cholera will not reach this country until next spring or summer.

Jefferson Medical College.—Dr. Robert E. Rogers, Professor of Medical Chemistry and Toxicology in this institution, has tendered his resignation of the chair, to which he was elected in 1877.

An Italian Doctress.—Fräulein Giuseppina Cattani has recently passed her medical examination at the University of Bologna *cum laude*. Miss Josephine is a pioneer among Italian medical women.

A Dangerous Project.—A St. Louis physician proposes to publish an "Encyclopædia of Medical Wit and Humor." We earnestly urge our respected and ambitious confrère to make it a pocket edition.

An Austrian Cholera Commission.—The authorities of Vienna have sent a commission composed of two physicians and three sanitarians to Toulon and Marseilles for the purpose of investigating the cholera epidemic.

Massachusetts General Hospital.—*The Boston Medical and Surgical Journal* is "glad to state that at the request of the Board of Trustees, Drs. H. J. Bigelow and R. M. Hodges have withdrawn their resignations from the staff of visiting surgeons."

The Successor of Dr. Wm. Pepper.—The *Medical News* states that Dr. William Osler, of McGill University, Montreal, is favorably mentioned in connection with the Professorship of Clinical Medicine in the University of Pennsylvania, lately held by Prof. Pepper.

An Ancient Hospital Confiscated.—The Hospital of Jesus in the City of Mexico is said to have been founded and endowed by the conqueror Cortez. The government has recently confiscated the property on the plea that the terms of the founder's will had not been complied with.

Pasteur's Hydrophobia Vaccine a Success.—The government commission which has been making experiments similar to those of M. Pasteur in connection with finding a preventive for hydrophobia, has reported that its investigations decisively confirm the correctness of the distinguished scientist's theory.

Living Quadruplets.—An apparently authentic account is given of the birth of four living male children by a woman named Mrs. H. W. Pullman, who resides near Eureka, Mo. The mother had previously given birth to triplets, and the husband may well look forward to the next pregnancy with interest.

Hydrochinon—Another Antipyretic.—Dr. Paul Seifert reports upon the antipyretic value of hydrochinon, $C_6H_6O_2$, a benzol-compound resembling resorcin. He finds that it reduces temperature as quickly though not quite so permanently as quinine. It has no irritative or toxic effects. The dose varies from one to four grammes.

The Carnegie Laboratory at Bellevue Hospital Medical College.—Plans for the erection of this new laboratory have been filed and work upon it will soon be begun. The building will be fifty feet square, and five stories high. It will be on East Twenty-sixth Street, on the south or opposite side from the present College Building.

That Office Thief.—Our warning of last week came too late to prevent the robbing of Dr. Francis J. Quinlan's office in West Fifteenth Street. Dr. Quinlan was robbed of clothing, valuable books, and surgical instruments. One of the most aggravating things in connection with these robberies is the stupidity and inefficiency of the city's detective force. We have yet to learn of any case in which they have done anything but look "devilish sly."

What Cholera has done for Russia.—Cholera first appeared in European Russia in 1823, says the *Nowoje Wremja*, and continued until 1838. During this time 500,000 persons were attacked, and 240,000 died (43 per cent.). In the second epidemic (1847–59), out of 2,589,000 attacked, 1,032,000 died (40 per cent.). In the next epidemic (1865–72) there were 326,968 deaths. Altogether cholera has attacked 4,000,000, and killed 1,600,000 Russians.

Specific Directions for Preventing Cholera.—The five points to be looked after in attempts to prevent cholera, as laid down by the Illinois Board of Health, are: 1. The condition of the water supply; 2. The disposition of night-soil, garbage, and sewage; 3. The cleansing of streets, alleys, and other public places; 4. The supervision of food supplies, and of market-places, slaughter-houses, and similar establishments; 5. The general sanitation of every house and its surroundings.

The Cincinnati Board of Health.—Our valued contemporary the *Cincinnati Lancet and Clinic* has for some time been trying to awaken the profession to an interest in reforming the sanitary management of the city of Cincinnati. A year ago the Cincinnati Board of Health was constituted of five saloon keepers and one quack doctor, now it has reformed enough to substitute a street paver for the quack. The medical profession is, however, still not represented at all in the sanitary councils of the city. This is certainly a very anomalous condition of affairs and we trust that the *Lancet and Clinic* will keep at work until some improvement is brought about.

Water and Disease—Sanitary Hydrophobia.—The following two items have recently been put in circulation. The tendency of modern sanitation is apparently to make people afraid of water, creating a kind of sanitary hydrophobia: "Of 142 epidemics of typhoid fever, observed in various localities, in 125 cases the epidemic had no other determining cause than the use of water containing impurities" ("Reports Local Government Board, England"). "If any taint (however small) of infective material gets access to wells or other sources of drinking-water, it imparts to large volumes of water the power of propagating disease" ("Mem. Local Government Board, England, July 13, 1883").

The Epidemiological Society of London held a conference on July 22d. The president of the society, Dr. Norman Chevers, C.I.E., opened the meeting with an address entitled "Health in India," and was followed by Dr. William Squire on "Change in Type of Epidemic Disease." The conference was concluded July 23d, when an all-day sitting was held. The subjects treated were "Leprosy in India and the Best Means of Preventing its Increase," by Surgeon-Major Pringle, M.D.; "The Behavior of Typhus in England during the Present Century;" and "A Consideration of the Present Aspect of Cholera in Europe." The latter subject was opened by Dr. Lawson, Inspector-General of Hospitals, and excited warm discussion among a number of medical gentlemen who were present.

A Discussion on Germ-Pathology and Cholera took place at the monthly meeting of the Newport Medical Society, August 5th. A number of New York and Boston physicians took part, including Drs. W. T. Lusk, Leroy Satterlee, and Dr. H. O. Marcy. The latter gentleman read a paper on the relations of micro-organisms to infectious diseases. He referred to the apparent contradiction between Florence Nightingale, in her communications to the New York *Herald*, and Dr. Koch, in his official letter to the Mayor of Toulon, the one of whom claims that personal contact with cholera was not to be feared, while the other strenuously condemns the possibility of even the slightest risk of personal contagion. Dr. M. argued that the true safety lay in the mean between the two extremes of opinion, and that constant and perfect sanitation, with avoidance of both direct and indirect exposure to the disease were required.

An Attorney-General who Understands Blood-Purifiers.—Time was, says *The Medical Chronicle*, when a gentleman holding in this State the exalted office of Attorney-General, had too nice a sense of the proprieties of his position to descend to recommend, in his official capacity, a quack preparation, as is done in the following communication, which is being extensively advertised in the newspapers: "The State of Maryland, Office of Attorney-General, Westminster, Md., April 28, 1884. Charles C. F. Schroeder, Esq.: Dear Sir—I am personally well acquainted with Dr. J. W. Steele and Dr. Wm. M. Hines. They are practising physicians of this county, of excellent standing and large experience, and thoroughly competent to speak as to the merits of your Iron Tonic and Blood Purifier. Very truly yours, Charles B. Roberts." Our contemporary very justly protests against the prostitution of the Attorney-General's office to any such business as the above.

Cholera and the Académie de Médecine.—At the session of the Académie de Médecine July 22d, a letter from M. Fauvel was read, in which he adhered to and defended his view that the cholera at Toulon and Marseilles was not Asiatic and not contagious. M. Fauvel's views may safely be considered the expressions of obstinate senility.

M. Jules Guérin delivered an address on cholera which was eloquent and interesting, though in some regards rather antiquated. M. Guérin talked of "epidemic constitutions," atmospheric and organic influences, and the evolution of epidemics under certain fixed laws. He thought the contagiousness of cholera a secondary matter, denounced quarantine, and commended the English method of inspection.

Progress of the Cholera.—A temporary increase in the number of cases of cholera at Toulon and Marseilles occurred during the latter part of last week owing to the intense heat and the return of many fugitives. On the whole, however, the violence of the disease has greatly abated in the cities mentioned. The number of deaths occurring daily has rarely exceeded four or five at Toulon and fourteen at Marseilles. On the other hand the disease has undoubtedly gained a firm hold in Southern France and Northern Italy. Many small towns have been attacked with great violence. Thus says a *Times* correspondent: "In the little village of Gignac, near Montpellier, forty cases of cholera have been found, and there have been numerous deaths. The panic there was so terrible that the fathers and mothers of families fled, leaving their little children uncared for. At Vogue, a village of less than eight hundred souls, in the Ardèche, over thirty cases, with seven deaths in the twenty-four hours have occurred. An outbreak of cholera in Algiers is feared. Some of the reports of deaths from cholera in the villages near Toulon are particularly heart-rending. In some of them more people died of cholera in a day than in Toulon during the same twenty-four hours. In Bordeaux there have been three deaths."

Reports state that examinations of the water from the wells and fountains in all the places visited by cholera show the presence of vast numbers of microbes.

The English cholera (cholera nostras) has broken out seriously at Northampton and in villages near Blackburn. Over two hundred were reported sick at one time.

So far as the mortality of the disease is concerned, the statistics of the Pharo Hospital, Marseilles, are instructive. These statistics show that 521 cases of cholera have been admitted, of which 313 ended fatally, or about 60 per cent. This is a high mortality rate for the disease.

A number of changes have been made in the various quarantine regulations: Spain has established a ten days quarantine against infected Italian ports. The Belgian Government has quarantined against all Mediterranean ports. At the port of New York, the Health Officer has issued some further regulations. Vessels on which cholera develops during the voyage to this port will, of course, be detained, the sick removed to the hospital, and the well persons to the Quarantine of Observation. Any cargo of which there is any suspicion will be discharged in Quarantine. The baggage of passengers from an infected district, or section of country bordering thereon, is required of captains to be kept separate from other baggage. Vessels discharging in Quarantine will be thoroughly disinfected before being allowed to come up to the city. The same rules will apply to baggage or cargo shipped from an infected to a healthy port and reshipped here. Vessels with cargoes wholly or in part of rags will not be given pratique if coming from infected ports, and if from healthy ports, satisfactory evidence that they have not been reshipped from infected districts will be required, as well as evidence that they have been collected where no suspicion of cholera exists.

Cheap Quinine.—Physicians should know that quinine is steadily decreasing in price, and has lately been sold as low as $1 an ounce. It is poor policy, therefore, to use the so-called "cheaper alkaloids" when quinine, which is more efficient, costs but little more. The cause of the decline in price is said to be the removal of the tariff, and an over-production on the part of foreign manufacturers. The world's production to-day is estimated at 4,500,000 ounces, of which Germany and Italy manufacture by far the greatest portion. There is considerable made in England, but this is of a superior quality, and its enhanced cost limits its consumption and consequent production. America consumed forty per cent. of the total production, or about 1,800,000 ounces. Prior to the removal of the tariff, 1,500,000 ounces were produced here, but the effect of the removal of the duty has been to decrease the manufacture and make the United States more dependent upon foreign supplies. It is estimated that now not more than 1,000,000 ounces are manufactured in the New World, but this is in part due to the destruction by fire, in Philadelphia, of the works of the largest American producers, who now send their bark to Europe to be prepared for the market. From the East Indies the shipments of the raw material to the United States were over 6,000,000 pounds, of which a very large proportion was shipped to Europe for account of the American manufacturers. Of late years the quality of the product has materially improved, the quinine now sold having not more than from two to five per cent. of the lower alkaloids, while it is but a short time since that quinine having ten per cent. of these was deemed a satisfactory article. This improvement is believed to be due entirely to the better quality of the bark obtained from the cultivated tree.

International Medical Congress.

EIGHTH SESSION,

Held at Copenhagen, Denmark, August 10–16, 1884.

BY CABLE TO THE MEDICAL RECORD.

Sunday, August 10th—First Day.

The eighth annual session of the International Medical Congress was formally opened on Sunday, August 10th, by Professor Panum, of Copenhagen, who delivered the following

ADDRESS OF WELCOME.

After thanking the King and Queen of Denmark, the King and Queen of Greece, and the State Council, he expressed his great gratification at the large audience present, and hoped that the present session of the Congress would tend to advance the science of medicine, and that a broad and liberal spirit, becoming the grand object in view, would characterize all its deliberations.

Sir James Paget followed with a brilliant address, in which he thanked Denmark on behalf of Great Britain for its gift of a princess who was a model prince's wife. He concluded by hoping that the present Congress would be equally successful with that held in London.

Professor Virchow, in behalf of Germany, hoped that the Congress would honor that country by its choice for a future meeting.

Professor Pasteur also addressed the Congress in some general remarks, in which he referred to the cos-

mopolitan character of science, and the impossibility of conforming it to any particular country.

The King and Queen of Denmark, Council of State, and King and Queen of Greece were present. Sixteen hundred members were in attendance; of these eleven hundred were foreigners, including one hundred Englishmen and about fifty Americans.

In the evening

A GRAND BANQUET

was tendered the members. It was largely attended.

MONDAY, AUGUST 11TH—SECOND DAY.

The Congress in its general session to-day listened to the address of PROFESSOR PASTEUR, of Paris, on

MORBIFIC MICRO-ORGANISMS AND VACCINIA MATTERS.

He described his different well-known experiments in the inoculation of rabies by injecting the virus into the veins of dogs, and the results in protection against the evil effects of the bites of rabid animals. He referred to the report of the French Government Commission appointed to investigate hydrophobia, stating that twenty-three dogs had been experimented upon by protection. All had been bitten by rabid animals in June last, and yet all had remained healthy. Of nineteen unprotected animals, similarly bitten, fifteen went mad. It was the intention of the Government Commission to repeat these experiments. In closing he emphasized the necessity of attempting to protect animals only, but if the dogs were protected the disease would be exterminated.

At the meetings of the sections, sixteen in number, the different Presidents delivered their addresses.

MEETINGS OF SECTIONS.

Section on Anatomy.—Papers read: "The Glandular Cells during Activity," by Professor Ranvier, of Paris; "Terminations of Sensitive Cutaneous Nerves," by Professor Merkel, of Königsberg; "Rotary Movements of Forearm," by Professor J. Herberg, of Christiana.

Section on Physiology.—Papers read: "Mucous and Albuminous Matters," by Dr. Hammarsten, of Upsala; "Fugitive Corpuscles," by Dr. R. Norris, of Birmingham; "Coagulation of Blood," by Dr. Wooldridge, of Cambridge; "Oxyhæmoglobin," by Dr. C. Bohr, of Copenhagen; "Glandular Cells," by Dr. Langley, of Cambridge; "Functions of Cutaneous Nerves," by Dr. Blix, of Upsala.

Section on Pathology.—Papers read: "Necrosis of Coagulation," by Professor Weigert, of Leipsic; "Bacterial Inflammation," by Professor Cornil, of Paris; "Jequirity," by Dr. C. J. Salomonsen, Copenhagen.

Section on Medicine.—Papers read: "On Uniform Nomenclature of Auscultatory Signs in the Diagnosis of Diseases of the Chest," by Professor Austin Flint, of New York; "The Blood-Corpuscles in Anæmic and Leucæmic Diseases," by Dr. S. Laache, of Christiana.

Section on Surgery.—Papers read: "The Iodoform Treatment," by Professor Mosetig-Moorhof, of Vienna; On Antiseptics—"The Sublimate Treatment," by Dr. M. Schede, of Hamburg; "The Treatment by Oxygenated Water," by Professor Paul Bert, of Paris; "Permanent Antiseptic Dressing," by Professor Esmarch, of Kiel; "Anæsthetics in Surgery," by Professor Bert, of Paris; "Colotomy," by Professor Bryant, of London.

Section on Obstetrics.—Papers read: "Myomata Uteri by Laparótomy," by Professor Koeberle, of Strasburg; "Supra-Vaginal Amputation," by Dr. Margary, of Turin; "Cæsarean Section," by Professor P. Miller, of Berne, and Professor Eustache, of Lille.

Section on Laryngology.—Papers read: "The Prognostic Significance of the Several Local Manifestations Observed in Tuberculosis of Larynx," by Dr. J. Solis Cohen, of Philadelphia.

Section on State Medicine.—Papers read: "School Hygiene in Denmark," by Professors Hertel, of Copenhagen, and Key of Stockholm, and Mr. Holbech, of Copenhagen.

TUESDAY, AUGUST 12TH—THIRD DAY.

At the general session to-day the address

ON THE NATURAL PRODUCTION OF MALARIA AND THE MEANS OF MAKING MALARIAL COUNTRIES HEALTHIER,

was delivered by Tommasi Crudeli, of Rome. (See next number of THE MEDICAL RECORD.)

INVITATION FOR CONGRESS IN AMERICA.

A communication was received from Dr. Billings, on behalf of the American Medical Association, inviting the Congress to hold its next session in Washington, U. S.

THE WORK IN THE SECTIONS.

In the Section on Pathology, Professor Grancher, of Paris, read a paper on "The Relations of Scrofulosis and Tuberculosis," and Professor Roquemondane, of Limoges, remarked on Ixodes, an almost unknown human parasite.

Section on Medicine.—Professors Ewald, of Berlin, Jaccoud and Grancher, of Paris, presented the subject of "Tuberculosis in its Different Relations to Etiology and Pathology."

Section on Surgery.—Dr. Lewis A. Sayre, of New York, exhibited his plaster-of-Paris jacket, and demonstrated its application. Professor Ollier, of Lyon, read a paper on "Excision and Orthrotomy in Tuberculous Joint Diseases," and Professor MacEwen, of Glasgow, Scotland, presented the subject of "Orthopedic Osteotomy for Genu Valgum and Club-foot."

Section on Obstetrics.—Professor Mikulicz, of Crakow, read a paper on "Antiseptics in Laparotomy." Professor Simpson, of Edinburgh, also read a paper on "An International Nomenclature in Obstetrics," and Professor Halberstma, of Utrecht, on "The Significance of Albuminuria in Pregnant Women."

Section on Ophthalmology.—The following papers were read: Dr. Redard, of Paris, "On the Examination of Vision of Railway Employees;" Professor Rachlmann, of Dorpat, on "Trachoma;" Professor Sattler, of Erlangen, on "The Anatomy of Ciliary Muscle."

WEDNESDAY, AUGUST 13TH—FOURTH DAY.

This day was devoted to excursions in steamers, which included one to the tomb of Hamlet at Elsinore.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, June 25, 1884.

FRANK FERGUSON, M.D., PRESIDENT, *pro tem.*

DR. FERGUSON reported on the specimens presented by Dr. Wackerhagen at the last stated meeting.

DR. J. H. RIPLEY presented, on behalf of a candidate, a specimen of *Phthisical Ulceration of the Larynx.*

DR. C. H. KNIGHT presented specimens of

NASAL POLYPI,

removed from a patient who gave a history of nasal catarrh of four years' standing, frontal headache, loss of smell, and, for the last six weeks, complete obstruction of the meatus.

The interesting point in the clinical history was with regard to the occurrence of asthma. There was no evidence, on physical examination of the chest, of pulmonary disease. Removal of the polypi had given the patient relief.

DR. W. M. CARPENTER referred to hypertrophy of the nasal mucous membrane as an etiological factor in hay fever, to which attention had been directed by Dr. Roe, of Rochester, and Dr. Sajons, of Philadelphia, and others.

DR. KNIGHT remarked that the symptoms in his case were those of asthma, rather than hay fever, and that the patient had not been a sufferer from the periodical affection known as hay asthma or hay fever.

DR. RIPLEY remarked that the tendency was toward the production of emphysema when there was obstruction to the entrance of air into the air-vesicles.

DR. KNIGHT remarked that probably the condition of obstruction, in his case, had not existed sufficiently long to produce emphysema; at least there was no evidence of its existence on physical examination.

DR. H. N. HEINEMAN presented a specimen illustrating

GENERAL TUBERCULOSIS.

Patient, aged seven months, was admitted to Mount Sinai Hospital June 7, 1884. Father has phthisis. Up to five weeks ago had been well. Then mother noticed frequent chilly appearance, but got better. For the past four weeks has been unusually quiet, and rolled its head. Three weeks ago had slight convulsive seizures, and for some time frequent stools with straining; urine diminished in quantity.

On admission there was frequent respiration, cyanosis, twitchings of both arms (chiefly the left), and a hydrocephalic cry. Seemed to suffer, but was observant. On the succeeding day opisthotonos and conjunctivitis manifested themselves. Depressed fontanelle.

Five days later there was paralysis of the extremities, most marked on right side. Pupils even and contracted. Opisthotonos gone. Died quietly June 22d. The temperature varied between 98° F. and 101.2° F.; was 96.2° F. on one occasion.

Autopsy.—Brain: much serum and pus in pia and beneath it, over the base; some over convexities. The right parietal lobe contained a collection of tubercles, each the size of a French pea, with softened centres, and numbering about twelve in all. The ependyma of the lateral ventricles contained translucent miliary tubercles. The lungs were studded with fine miliary tubercles. The kidneys, spleen, and liver contained miliary tubercles.

DR. RIPLEY asked if the child's lungs were examined before death.

DR. HEINEMAN answered that they were, and that the diagnosis of general tuberculosis was made, from the fact that the father had phthisis and the child gave a history of emaciation, etc., which could not be accounted for readily by the general physical signs. A moderate amount of bronchitis was developed before death, and it was supposed that there was pulmonary tuberculosis. The condition of lungs, as seen in the specimen, would not necessarily give rise to physical signs.

DR. RIPLEY was not prepared to accept the last statement, as when there exists any considerable amount of tubercular infiltration there are not only the physical signs of bronchitis, but there is a change in vocal fremitus and resonance and the pitch and quality of the respiratory murmur.

In a case which he had seen recently, in which tubercles did not exist except in the lungs, he was obliged, in absence of a tubercular history, to make a diagnosis by means of physical signs; there were a few bronchial râles, and decided changes in vocal fremitus, resonance, and respiratory murmur. In a case with so much infiltration as existed in the lungs presented by Dr. Heineman he believed that, as a rule, there was some change in the physical signs mentioned which could be recognized.

The specimen was, therefore, additionally interesting on account of the absence of any such change.

With regard to the temperature in tubercular meningitis, he made an autopsy on the body of a child who died of that disease, and during the last few days of life the patient's temperature was 97½° F. As Dr. Heineman had said, there was, very often, no preagonistic rise of temperature in this class of cases. Dr. Ripley had the records of between fifty and sixty cases of tubercular meningitis, and the temperature had generally been low. The symptoms, he thought, varied somewhat with the extent of invasion of other organs. Sometimes the temperature throughout was as high as 103° F., but, as a rule, it was subnormal, or not higher than 101° F.

In Dr. Heineman's case, the temperature rose to 102° F. and over, and Dr. Ripley thought it quite probable that the general tuberculosis increased the rise.

DR. FERGUSON asked Dr. Ripley if he had noticed any ratio between the amount of exudation and the rise of temperature in tubercular meningitis.

DR. RIPLEY had not definite data on that point, but thought that the temperature was not especially influenced by the quantity of exudation.

The committee appointed to memorialize the late Dr. Willard Parker next offered the following:

IN MEMORIAM—WILLARD PARKER, M.D., LL.D.

It is with deep and unfeigned regret that we record the death of our first acting president, Dr. Willard Parker, who expired on April 25, 1884, at the ripe age of eighty-four years.

He was so well and capable up to a very short time ago that his decease then would have been an unmitigated grief to us, and to all who loved him. But during the last eighteen months of his life the infirmities of age and the pangs of sickness had borne so heavily upon him that our sorrow is greatly subdued in view of the peace which has come upon him. To us is now only left the grateful duty of recording his manifold virtues, his great and honorable services to his profession and to the public, and to express our sincere sympathy to his family.

The New York Pathological Society was founded in June, 1844, just forty years ago, and several years before the London Pathological Society was established. For the first few months of its existence its meetings were presided over by temporary chairmen, elected at each meeting. Near the end of its first year, viz., in October, 1844, the distinguished and lamented Dr. John A. Swett, then the leading medical pathologist of this city, was elected president, and Dr. Parker, who was well grounded in surgical pathology, vice-president.

Ill-health, soon followed by death, prevented Dr. Swett from serving, and we are not aware that he ever filled the presidential chair. But so highly did he appre-

ciate his membership in our Society, that in his treatise on "Diseases of the Chest," which contained a course of lectures delivered at the New York Hospital, he announced himself as simply Physician to the New York Hospital, and member of the New York Pathological Society.

Dr. Parker, our first acting President, was successively re-elected in the years 1845, 1846, and 1847, with little or no opposition, and quickly gave our Society a standing before the medical world which few other men could then have given it. Still he had good material to work with, for during these three years it counted among its members, William C. Anderson,* Daniel Ayres,* John H. Borrowe,* Gurdon Buck,* H. D. Bulkley,* Alonzo Clark, James Crane, Edward Delafield,* Abraham DuBois, George Elliott,* John Forry,* Anthony Gescheidt,* Chandler Gilman,* Middleton Goldsmith, John H. Griscom,* Thaddeus Halstead,* Charles E. Isaacs,* W. W. Jones, William H. MacNeven,* John T. Metcalfe, George A. Peters, John C. Peters, Alfred C. Post, William C. Roberts,* Gustavus A. Sabine, Lewis A. Sayre, John O. Stone,* John A. Swett,* Isaac E. Taylor, Robert Tomes, William H. VanBuren,* Hugh Walsh,* Robert Watts,* James R. Wood,* Dr. Wotherspoon,* and others of like ilk.

Of these thirty-seven early members no less than twenty-two have died (those marked thus, *), and this Society has repeatedly been compelled to go in mourning for lovable and useful men, who could ill be spared.

When Dr. Parker was called to the first presidency he was in the prime of life, just forty-five years of age, having been born in 1800. He was a native of New Hampshire, and had only been six years in this city. But he was already Professor of Surgery in the College of Physicians and Surgeons, and was deservedly very popular, having risen rapidly to the position of one of the foremost surgeons and physicians, and most acceptable teacher and lecturer, not only in the eyes of New York, but of the whole country.

He had been a pupil and assistant of Dr. John C. Warren in anatomy and surgery, had served in several hospitals, and been a teacher and professor of anatomy and surgery in other colleges.

He was an excellent presiding officer, and took a warm, well-sustained interest in the welfare of this Society. Among his earliest services to it was the active part he took, with others, in 1845, in housing it in the College of Physicians and Surgeons, where it has remained until this day, and, hopefully, always will remain, to the honor and credit of both.

It was no small benefit to the infant society to be settled so conveniently for its peculiar work, and at such a small annual expense. This has enabled it to preserve all its records and minutes for forty years; to have them widely published in various journals, and to issue several volumes of its transactions free to its members.

Dr. Parker was always a thoughtful pathologist, rather than a minute pathological anatomist; just as he was a great conservative surgeon and hygienist, rather than a mere operator. Although he had a wonderful knowledge of anatomy and of the principles of surgery, the glamour of even major operations never seemed to have the slightest charm for him. He always appeared to think most surgical operations were unfortunately rendered necessary by the imperfections of medical and hygienic art, greatly aided by the ignorance and obstinacy of patients. He obviously regarded great pathological specimens as so many failures in the treatment of disease. He was always rational, rather than merely empirical, or mechanical, and ever aimed to prevent disease and avoid operations, rather than to drug his patients, mutilate them, or make post-mortem examinations of them.

Still he rejected no aids in the study of disease, and always maintained his active connection with this Society, even when loaded with numberless other cares and burdensome honors, and while laboring so hard, from 1866 down, in the establishment and working of the Metropolitan Board of Health, where his views on hygiene could have full play. He was ever ready to sustain us with his presence and example, and with a strong hand, kindly heart, active brain, and ready purse. Even in the last year of his life, when almost crushed with the infirmities of his great age and the pangs of disease, he delighted to counsel for its welfare and honor, and to review its early history and struggles.

For these and many other things this Society owes a debt of gratitude to the memory of Dr. Parker, which it is not only eminently becoming for it to acknowledge, but which we are only too happy to promptly and frankly render.

To those who knew him in his prime we need not say that we were very proud of our first president as a great and good man, a faithful citizen, an eminent physician and surgeon, a brilliant teacher, and a careful watchman over the public health.

Many of us went farther, and took a justifiable pride in those winning personal and mental endowments which a kind Providence had showered upon him; in his manly beauty and impressive stature, in his attractive, gentlemanly appearance and kindly presence, in his great mental vigor and physical activity, in his exceptionally regular and correct personal habits, in his buoyant and even joyish temperament, in his spotless morality and deep religious convictions, we thought him an embodiment in himself of almost all that is good, useful, lovable, and we are, and all his friends should be, greatly comforted in his loss that these high qualities were at our, and their, service so long, and so far beyond the period of life ordinarily allotted to man, for work and for the comfort of his fellows.

He has gone to join that not small band of our illustrious deceased presidents, himself by far not the least, *quorum pars magna fuit.* His closes, for a time, the list which contains the honored names of Wm. H. Van Buren, Robert Watts, Edmund R. Peaslee, Gurdon Buck, Ernst Kracowizer, James R. Wood, John A. Swett, Erskine Mason, Charles E. Isaacs, Jackson Bolton, David S. Conant, Wm. B. Bibbins, and Henry Van Arsdale.

Dr. John A. Swett, our first nominal president, died at the early age of forty-five years. Dr. James R. Wood, our second president, was born in 1816, and died aged sixty-five years. Dr. Wm. H. Van Buren, our fourth president, was born in 1819, and died aged sixty-five years. Dr. Charles E. Isaacs, our fifth president, was born in 1822, and died aged forty-eight years. Dr. Jackson Bolton, our eighth president, was born in 1815, and died aged fifty-one years. Dr. Robert Watts, our ninth president, died aged fifty-five years. Dr. Edmund R. Peaslee, our tenth president, was born in 1814, and died aged sixty-five years. Dr. David S. Conant, our fourteenth president, died aged forty-five years. Dr. Gurdon Buck, our sixteenth president, was born in 1807, and died aged seventy. Dr. Wm. B. Bibbins, our eighteenth president, was born in 1825, and died aged forty-six years. Dr. Ernst Kracowizer, our twentieth president, was born in 1822, and died aged fifty-three years. Dr. Erskine Mason, our twenty-fourth president, died aged forty years. Lastly, Dr. Willard Parker, our first president, was born in 1800, and died aged eighty-four years.

Thus it will be seen that, with the sole exception of Dr. Parker, none of our deceased presidents lived to be very old men. Only one beside him, Dr. Gurdon Buck, reached his seventieth year. No less than three—viz., Drs. Van Buren, Peaslee, and James R. Wood—died in their sixty-fifth year. Drs. Bolton, Kracowizer, and Watts died respectively in their fifty-first, fifty-third, and fifty-fifth years. No less than six died before they attained their fiftieth year—viz., Dr. Isaacs, at forty-eight; Dr. Bibbins, at forty-six; Drs. Swett and Conant, at forty-five; and the beloved Dr. Mason at the very early age of forty years.

Many of our deceased presidents were always delicate; and many were cut off by sudden and sharp sickness. Dr. Parker came from a long-lived and excellent pre-Revolutionary stock on both sides of his family. He lived upon a farm until he was nineteen years old, and although he worked hard and performed excellent service for the rest of his life, he always took great care of his general health.

Our senior living ex-president, in point of years, is Dr. Alfred C. Post, thirteenth president, born in 1806, aged seventy-eight. Our senior ex-president, in point of service, is Dr. Thomas M. Markoe, fourth president, born in 1821, aged sixty-three years. Then follow Dr. John T. Metcalfe, seventh president, aged sixty-two; Dr. John C. Dalton, twelfth president, born 1825, is aged fifty-nine; Dr. Thos. C. Finnell, fourteenth president, born 1827, is aged fifty-seven; Dr. Abraham Jacobi, sixteenth president, born 1830, is aged fifty-four; Dr. Henry B. Sands, seventeenth president, born 1830, is aged fifty-four; Dr. Lewis A. Sayre, twenty-first president, born in 1820, is aged sixty-four years; Dr. Joseph C. Hutchison, twenty-second president, born in 1827, is aged fifty-seven; Dr. Alfred L. Loomis, twenty-third president, born in 1831, is aged fifty-three years; Dr. Herman Knapp, twenty-fifth president, is aged fifty-two years; Dr. Francis Delafield, twenty-sixth president, born in 1841, is aged forty-three years; Dr. Charles K. Briddon, twenty-seventh president, born in 1827, is aged fifty-seven; Dr. Edward G. Janeway, twenty-eighth president, born in 1841, is aged forty-three years; Dr. John C. Peters, born in 1819, twenty-ninth president, is aged sixty-five years; Dr. Edward L. Keyes, thirtieth president, born in 1843, is aged forty-one years; Dr. T. E. Satterthwaite, thirty-first president, born in 1843, is aged forty-one years; Dr. Ed. C. Seguin, thirty-second president, born in 1843, is aged forty-one years; Dr. George F. Shrady, born in 1837, is aged forty-seven years.

It will be seen that the majority of our presidents have been young men. Dr. Swett was under forty years of age when elected president; Dr. Parker, forty-five; Dr. James R. Wood, thirty-two; Dr. Markoe, only thirty; Dr. Van Buren, thirty-one; Dr. Isaacs, only twenty-nine; Dr. Metcalfe, thirty-one; Dr. Van Arsdale, thirty-seven; Dr. Bolton, thirty-nine; Dr. Watts, forty-nine; Dr. Peaslee, forty-four; Dr. Dalton, thirty-four; Dr. Post, fifty-five; Dr. Finnell, thirty-five; Dr. Conant, forty; Dr. Jacobi, thirty-four; Dr. Buck, fifty-eight; Dr. Sands, thirty-six; Dr. Bibbins, forty-two; Dr. Kracowizer, forty-six; Dr. Sayre, forty-nine; Dr. Hutchison, forty-three; Dr. Loomis, forty; Dr. Mason, thirty-eight; Dr. Knapp, forty-two; Dr. Delafield, thirty-four; Dr. Briddon, forty-nine; Dr. Janeway, thirty-six; Dr. Peters, fifty-nine; Dr. Keyes, thirty-six; Dr. Satterthwaite, thirty-seven; Dr. Seguin, thirty-nine; Dr. Shrady, forty-six years.

Signed by authority, JOHN C. PETERS, *Chairman.*
C. C. LEE.
GEO. L. PEABODY.

LACTIC ACID occurs in sour milk from the spontaneous fermentation of sugar of milk under the influence of casein; this transformation is called *lactic fermentation.* A similar change is produced in dextrine, glucose, cane-sugar, etc., by the action of casein and other protein compounds. It is found in many vegetable products which have turned sour. The sarcolactic acid of flesh and muscle is very sour, and in excess causes rheumatism. It is soluble in ether, alcohol, and water, coagulates milk and albumen, displaces carbonic and acetic acids, and yields salts soluble in water and alcohol. It has been used in dyspepsia in place of hydrochloric acid; and when given in diabetes symptoms of acute rheumatism have appeared which have subsided on stopping the acid. Inflammation of the joints and pericardium have been caused by it in animals. It is useful in all alkaline diseases, including typhus and typhoid fevers, erysipelas, diphtheria, etc.

THE BERLIN SOCIETY OF INTERNAL MEDICINE.

Stated Meeting, June 30, 1884.

HERR LEYDEN, PRESIDENT, IN THE CHAIR.

(Special Report to THE MEDICAL RECORD.)

THE Society having been called to order, the first speaker of the evening was HERR MENDELSOHN, who presented some preparations showing

TUBERCLE BACILLI IN THE URINE AND KIDNEYS.

The patient had suffered for some time from a bladder trouble and incontinence of urine, and died rather suddenly from meningitis. The urine was cloudy, alkaline in reaction, and contained albumen. The urine having been evaporated and the dried sediment stained, the tubercle bacilli were seen to be present in large numbers. Koch, in his latest work on the etiology of phthisis, has described the bacilli obtained by culture as large bodies twisted into multiple serpentine shapes, the smallest of them looking like the letter S. The bacilli found in the urine, and also in pus taken from the kidney post mortem, presented exactly this appearance.

HERR A. BAGINSKY then exhibited some specimens demonstrating the

CHANGES INDUCED IN THE INTESTINAL CANAL OF CHILDREN BY CHRONIC CATARRH.

He had not seen any mention made of this condition in any of the recent text-books. The affection attacks first the mucous coat, but passing gradually into the deeper layers induces there changes of a very serious character. A child, seven months old, was brought to him for treatment, suffering for some time from diarrhœa and great emaciation. The stools were thin, mucous, and of a greenish color. After a period of temporary improvement the diarrhœa returned, and soon the child died. At the autopsy the mucous membrane of the large intestine was seen to be swollen and thickly studded with granulations, so that the intestine, when smoothed out, looked like a coarse file. On microscopical examination the glands of Lieberkühn were found to have undergone peculiar changes. They were of all sorts of odd shapes, presenting warty outgrowths and bifurcations, and on careful section the epithelium was seen to be the seat of hyaline degeneration. The speaker expressed the opinion that Lieberkühn's glands possessed a certain digestive function, and that the pathological changes occurring in them should be more carefully studied than they have hitherto been.

HERR BOECKER then related a case of

GANGRENOUS INFLAMMATION OF THE LARYNX,

situated in the aryteno-epiglottidean fold. Laryngeal examination showed large shreds of gangrenous tissue hanging down from the neighborhood of the pyramidal sinus. The patient stated that he had been suddenly seized, ten weeks before, with sore throat and difficulty in deglutition. At the same time there was considerable dyspnœa, and when this subsided the breath became so extremely offensive that he could not eat.

HERR ALTMANN then read an interesting paper on some of the

SUCCEDANEA OF DIGITALIS.

He had made a number of trials during the past year with caffeine and adonis vernalis in the treatment of cardiac and renal diseases, and thought that a recital of the results obtained by him would not be without interest. His experience with

CAFFEINE

had been that under its influence the heart's action was strengthened and the arterial tension increased. Its in-

fluence in reducing the frequency of the pulse was not as marked as that of digitalis. The urine was invariably increased in quantity during the administration of the drug. It had been stated by Riegel that the simultaneous exhibition of narcotics weakened the action of caffeine, and the author's experience had led him to the same conclusion.

ADONIS VERNALIS,

a wild plant of the order of ranunculaceæ, growing in southern Europe, was at one time employed as a drastic cathartic, and also as a heart-tonic, but had soon been forgotten. Some trials had of late been made of it by Dr. Bubnoff, at the instance of Professor Botkin, when it was found to possess some really valuable properties as a heart-tonic and diuretic. Cervello had found the active principle of the plant to reside in a glucoside to which he gave the name of

ADONIDINE.

Its action was very similar to that of digitaline in strengthening the cardiac pulsations, increasing arterial tension, and, after its continued administration for a length of time, increasing also the irritability of the striped muscular tissue.

The author had employed adonis in a number of cases of valvular disease, fatty degeneration, and myocarditis, as well as of parenchymatous nephritis. He gave in detail the history of two cases in which he had employed adonis with signal success after having been obliged to discontinue digitalis on account of the dangerous symptoms produced. Yet adonis did not act equally well in all cases. In two instances he was forced to give it up owing to its causing pain in the kidneys and general malaise. The simultaneous administration of narcotics in these cases had seemed to influence its action in no noticeable degree. All observers agreed that there was no cumulative action of the drug. That large doses might be given without danger was evidenced by the fact that the Russians were accustomed to take it in unlimited quantities as a remedy against the drinking habit. It was given medicinally in infusion or decoction (℥ j.–ij. to ℥ vj.), in doses of a tablespoonful four or more times a day. In conclusion, Herr Altmann submitted that adonis vernalis is a cardiac regulator in the same sense as is digitalis. It strengthens the heart's action and reduces the number of its pulsations, raising at the same time arterial tension, and increasing markedly diuresis. The indications for the use of adonis are the same as for digitalis, but it is more rapid in its action than the latter drug, and never exhibits any cumulative effect. Finally, it may often be productive of good results where digitalis has failed.

Herr Michaelis had had a case of excessive ascites and œdema which had resisted all the ordinary diuretics, and in which digitalis gave rise to most alarming symptoms. As a last resort he determined to try adonis, and was delighted to find that under its influence the excretion of urine was at once increased. The ascites and anasarca disappeared within a short time.

Herr W. Lublinski was induced to try adonis vernalis on the recommendation of Professor Botkin, of St. Petersburg. He had used it in a number of cases of dropsy consequent upon valvular insufficiency, cardiac debility, and Bright's disease. The principal effect of the drug, and that by which it won its fame in Russia, is seen in increased diuresis. He had observed one peculiarity in the diuresis of adonis, which was that the specific gravity remained high, although the total amount of urine excreted was so greatly increased. This was due to the fact, noticed by Botkin, that there was an increased excretion of urates and chlorides during the administration of the drug. The speaker had not observed the favorable influence upon the heart which others had claimed for adonis. In a few instances only had he seen any increase of strength in the heart's action, neither had the pulse become less rapid and more regular, nor the dyspnœa less urgent. In most cases he was obliged to fall back on digitalis in order to obtain this result.

In addition to this disadvantage, adonis possesses some very unpleasant, though not dangerous, properties. Herr Lublinski's patients had complained much of the extreme bitterness of the drug, and he had found nothing which would in any noticeable degree disguise this taste. It often caused nausea, and even vomiting, and sometimes had to be discontinued on account of a diarrhœa which was excited by it. In summing up the results of his experience, the speaker maintained that adonis vernalis could never be accepted as a substitute for digitalis in all cases. It is useful in those cases in which it is desirable to induce diuresis; but even here it should be given only when digitalis is contraindicated by the existence of a very slow pulse, or when a cumulative action is to be feared. He stated, for the benefit of those who might wish to try it in their practice, that it could be obtained of Gehe & Co., in Dresden.

The active principle, adonidine, is a glucoside, containing no toxic properties. It is amorphous, dissolving freely in alcohol, but only slightly soluble in water and ether. The maximum dose for a frog is 1¼ grain. It has no cumulative action.

Herr Lenhartz had used adonis in a number of cases of pleurisy, nephritis, weak heart, etc., in which all other remedies had failed. The results were in general very favorable. He was especially pleased with the diuretic action of the drug.

Herr Leyden stated that he was engaged in the attempt to make other more satisfactory preparations of adonis than those hitherto in use, but his labors had as yet been unproductive of result. The active principle was unsuited for internal administration, owing to its slight degree of solubility in water. Adonis had advantages as well as disadvantages in comparison with digitalis. It exerts no regulating action upon the heart, and seldom slows the pulse to any appreciable degree. Its chief advantage is that it has no cumulative effect, and further, it causes no such digestive disturbances as are frequently seen to follow the prolonged administration of digitalis. It can also be given in many cases of weakened heart and slow pulse in which digitalis would be contraindicated. It is, upon the whole, the best succedaneum of digitalis that we possess.

As regards

CONVALLARIA,

the speaker said that his early experience with the drug had not been of such a nature as to encourage him to continue in its use. Squills resembled adonis in its diuretic action, but it was less reliable. He thought the history of adonis exemplified very strikingly

THE RELATIONS BETWEEN PHYSIOLOGICAL EXPERIMENT AND MEDICAL PRACTICE.

There are many substances which possess properties similar to those of digitalis, and which give almost identical results in experiments upon frogs. But in practice it is found that the various drugs are by no means of equal value. Thus it is evident that in the treatment of pathological conditions we cannot rely wholly upon the properties of any drug as determined in the laboratory, but must determine anew for ourselves, by actual experiment, what value each substance possesses when brought face to face with disease.

The Society, on motion, then adjourned.

The Forceps in Breech Presentations.—Professor R. Harvey, of Calcutta, advocates the use of the forceps in breech presentations in certain cases (*Indian Medical Gazette*, June, 1884). In this opinion he is now supported by Huter, Haake, Lusk, Gooch, Hamilton, Miles, and Agnew, so that the older views as to the inutility of this procedure need to be somewhat changed.

THE BIOLOGICAL SOCIETY OF PARIS.

Stated Meeting, July 12, 1884.

M. Paul Bert, President, in the Chair.

(Special Report for The Medical Record.)

The Society was called to order by the President.

M. Mairet detailed the results of some experiments made by him to determine the modifications occurring in the

ELIMINATION OF PHOSPHORIC ACID

in the subjects of epilepsy, melancholia or mania In the latter disease the results differ according to the particular phase during which the investigations are made. In the stage of excitement there is an increase in the elimination of nitrogen and phosphoric acid. In the period of depression the nitrogen and alkaline phosphates are diminished, while the earthy phosphates are increased. There is a decrease in both nitrogen and phosphates during a remission. In epilepsy there is an increased elimination of these substances during an attack. In melancholia the earthy phosphates are increased in amount, and the alkaline phosphates and nitrogen are diminished. M. Mairet thought his investigations were of practical value as furnishing indications for the treatment of these affections.

M. Henninger described the method employed by him in determining the

PROPORTION OF NITROGEN IN UREA.

This method was a modification of that proposed by Dr. Kjedal, of Copenhagen. It was very simple, and could be completed within two hours.

M. Gréhant then called attention to the dangers of the

DISINFECTION OF BAGGAGE BY NITROUS VAPORS,

as was done in some of the railway stations. The porters who removed the disinfected baggage incurred no slight risk. Experiments upon dogs had shown that the respiration of nitrous vapors was always dangerous, and might even be fatal in its consequences. It was very well to try to kill the microbes, but it was hardly the correct thing to kill men at the same time.

M. Rabuteau thought that the question raised by M. Gréhant was one of very grave importance. The inhalation of nitrous vapor determines profound changes in the blood, the effects of which may not be seen immediately. Workmen exposed to these fumes had been known to die suddenly after they had returned to their homes, although while at work they had experienced no ill effects.

M. Henninger cited the case of a chemist in Edinburgh, who died in consequence of inhaling these vapors. His laboratory assistant was also made very ill, but finally recovered.

M. Gréhant read a note upon

ALIMENTATION BY PEPTONES,

and demonstrated a simple method of making peptones for therapeutic use.

M. Bouchereau had prescribed peptones in a number of cases of mental disease, and had observed a marked improvement in the physical condition, and sometimes also in the mental state.

M. Henninger mentioned a paper which he had published upon the

RECTAL ADMINISTRATION OF PEPTONES.

He also related an instance in which a patient, who had become greatly reduced, lived for several weeks upon injections of peptones. He always added sugar and laudanum to the enemata. He had never seen any inflammation of the rectum following these injections.

M. Quinquand had studied the effects of peptones in the direction of increased bodily weight and augmentation in the quantity of urea excreted. He had found an increased formation of urea to take place at the same time that the patient gained in weight. This he thought, proved conclusively that the peptones were assimilated. He related several cases in which he had observed benefit from this mode of alimentation.

M. Dastre thought that the facts related by M. Quinquand were especially valuable in disproving the statements made by certain German writers. These latter, having examined only the products of respiration, presumed to assert that peptones were inert.

The Society then adjourned.

THE HOSPITALS MEDICAL SOCIETY OF PARIS.

Stated Meeting, July 11, 1884.

M. Bucquoy, President, in the Chair.

(Special Report for The Medical Record.)

The Society having been called to order, M. Besnier delivered an address of some length upon the desirability of preparing for

THE APPROACHING CHOLERA EPIDEMIC.

He thought it necessary for the physicians of Paris to bestir themselves if they wished to avoid a repetition of what had just occurred at Marseilles. The daily papers were full of the visit made by Dr. Koch, in the character apparently of sanitary inspector and adviser to the physicians and municipality of that city. Now, either the physicians knew beforehand all that Dr. Koch told them, and his advice was therefore superfluous, or else they did not know it, and then it was not to Dr. Koch that they should have applied for instruction. M. Besnier then spoke of the measures that had been taken in Paris to prepare for the probable appearance of the disease. Two hospitals, of the capacity of two hundred beds each, had been made ready, one on each bank of the Seine. In the event of an epidemic, therefore, there was accommodation for four hundred patients at once, and then there would be time enough to prepare for more if occasion arose. He stated, in answer to a question of one of the members, that experiments were now being conducted to determine the practicability of

BURNING THE CHOLERAIC DISCHARGES.

This was to be done by means of portable furnaces mounted on wheels. The dejections could be thrown into the furnaces as soon as they were received. If this idea were practicable, it would certainly be an efficient way of destroying every contagious principle.

M. Vallin then read a very interesting paper upon the

TRANSMISSIBILITY OF PULMONARY PHTHISIS.

The paper was in reality the report of the committee on phthisiology appointed by the Society some time previously. The author first gave the facts upon which was based the doctrine of the inoculability of tuberculosis, and stated that the contagious principle was contained in the tubercular matter, the muscles, and perhaps also in the lymph and the milk. It had been admitted that the tubercular virus was inoculable, but at the same time it had been denied by some that it could be transported from one person to another in the ordinary conditions of every-day life. The author thought, however, that the evidence of the contagiousness of phthisis was certainly as convincing as that in the case of glanders, and there were very few who would care to deny the contagiousness of the latter disease One fact worthy of careful study in this connection was the danger of the formation of

CENTRES OF CONTAGION

in houses in which a number of phthisical patients had been collected together. Cohnheim, who had formerly denied the contagious nature of tuberculosis, was converted to the opposite opinion by the fact that his animals all became tuberculous, although they had not been

inoculated, simply from living in his laboratory, which had become infected with the tubercular virus.

It has been denied that the facts observed in animals were applicable to man, but the cases of contagion recorded by the Collective Investigation Committee in England are so numerous as to be virtually conclusive. Of the 1,078 answers received to their circular concerning the transmission of tuberculosis, 261 were affirmative. Of this number there were 190 cases in which phthisis occurred in those who had no hereditary predisposition. A similar result was obtained by the German committee. One case in this category was particularly striking. Dr. Hyades, a physician attached to the Cape Horn mission, stated that phthisis was unknown among the natives of Terra del Fuego before the advent of the English missionaries, and this despite the fact that they lived in the open air, but scantily clothed and exposed to all the vicissitudes of an intemperate climate. But after they had been partially civilized, although they were now warmly clad and lived in decent houses, they were nearly decimated by phthisis. Among the missionaries with whom they lived there were several with tuberculosis.

It had been asserted that those who became tuberculous after nursing phthisical patients, became so in consequence of the fatigue and anxiety from which they suffered. But if this were the case, those who nurse patients with cardiac, renal, or other chronic diseases ought equally to become consumptive, and this, experience shows, does not occur. It is true the negative testimony against the contagiousness of tuberculosis is very strong, but taken in connection with the positive testimony on the other side, it only proves that pulmonary consumption is not as markedly contagious as some other diseases, measles or small-pox for example.

Having thus established, M. Vallin continued, the contagious nature of the disease, he would now lay down some general rules bearing upon the

PROPHYLAXIS OF TUBERCULOSIS.

Physicians should be careful, while seeking to enforce the necessary prophylactic measures, not to preach too strongly the theory of contagion in phthisis. For the public was very selfish and quick to take alarm, and if once people became convinced that there was a real danger of contagion in this disease, they might run to the extreme, and shun the consumptive as they would a leper. A patient with phthisis should always sleep alone, in a well-ventilated room. Especial care should be taken in the case of patients with the buccal, pharyngeal, or laryngeal forms of tuberculosis, and it would be well for these to inhale iodoform vapor, in order to render their breath as innocuous as possible. Children convalescing from measles and bronchitis of the smaller tubes should be kept away from association with consumptives. Patients should be forbidden to expectorate in their handkerchiefs or on the ground, but should use spittoons containing some damp sand or sawdust. The spittoons should be washed in boiling water or in a solution of chloride of zinc, one ounce to twenty ounces of glycerine and water. The rooms in which phthisical patients have died should be disinfected by burning sulphur, one ounce to every cubic yard.

Finally M. Vallin summed up the

CONCLUSIONS OF THE COMMITTEE

briefly, as follows:

1. The transmissibility of pulmonary tuberculosis is very probable, though not as yet indubitably proven by facts.

2. Isolation of consumptives, in the same sense as that of patients suffering from diphtheria or small-pox, is neither necessary nor desirable. Yet in view of the probable contagiousness of the disease, the public should be urged to adopt certain prophylactic measures similar to those enunciated in the body of the report.

The Society then adjourned.

Correspondence.

THE PERIOD OF GREATEST RISK FROM CONSUMPTION.

To the Editor of The Medical Record.

SIR: In THE MEDICAL RECORD of July 12th there is an article by Edgar Holden, M.D., entitled "When are we at Greatest Risk from Consumption?" He writes as follows: "Rare facilities for prosecuting an investigation to obtain a correct result have led me with considerable labor to a conclusion as startling as I trust it will be found conclusive, viz., that death from consumption, instead of being, as is almost universally supposed, most prevalent in early adult life in this country is in reality not so, but grows relatively more frequent as life advances." He supports this position with suitable arguments, and a diagram showing by figures the actual and relative mortality from the disease at different periods of life. I do not object to, but concur in his conclusion, although it is not so novel and consequently so startling as he supposes, but I do object to his appropriating without definite acknowledgment the labors of others. The subject of the relation of age to consumption was carefully examined by myself for the Mutual Life Insurance Company from the statistics of their own experience and the best tables of vital statistics then accessible. The results were published by the company in 1877 in their "Mortuary Experience of the Mutual Life Insurance Company of New York." The diagram published by Dr. Holden is his own, but the statistics and figures on which it is founded are, with one exception, those published in the above-mentioned report and here used by him without acknowledgment. The one exception is the experience of the life insurance company with which he is connected. The statistics of this company are valuable, but they can scarcely be supposed to possess, like Aaron's serpent, a miraculous power of swallowing all the others.

Dr. Holden's words would seem to indicate that the "considerable labor" was his own, the line of argument his own, and the "startling conclusion" a discovery of his own, while at the very time of constructing his diagram he was using another's work, and had before him the pages elaborating the same line of argument and establishing by statistics a conclusion which had been known to Laennec, Watson, and Christison.

Respectfully yours,

E. J. MARSH, M.D.

PATERSON, N. J., July 21, 1884.

SHALL OFFICERS OF THE ARMY ENGAGE IN PRIVATE PRACTICE?

To the Editor of The Medical Record.

SIR: On July 19th you published in THE RECORD a letter from Dr. John G. Stanton, in which he complains of the privilege granted officers of the army to engage in private practice. The statements which the doctor makes are presented in such an *unfair* light that they should be answered. It cannot be done better than by giving an extract from a letter written by Dr. Heiskell many years ago, when he was in charge of the Surgeon-General's Office, more so since it seems that his opinions have been a guide in matters of the same nature ever since. Dr. Heiskell wrote as follows:

"Whether, by your expression, 'putting themselves in competition' with you, you mean to convey anything more than that they comply with the applications of those who desire their professional aid, is not clearly understood. If neither a breach of professional etiquette nor any improper means to obtain professional employment is charged against them, it is not perceived that this department can, with propriety, interfere in the matter. . . . When, therefore, it does not interfere

with their military duties, medical officers have a right to give their professional advice, etc., to whomsoever they please, and they have always been permitted to do so with a view to their professional advancement. Indeed, at military posts occupied by a small number of troops, and where of course the subjects of disease are few in number, and the complaints of these few present but little variety of character, it is rather desirable than otherwise that the army physician should extend his sphere of action to the citizens immediately around him, so as to become familiar with disease under all circumstances, the maladies prevailing through the country and among the citizens generally, as well as the diseases peculiar to the soldier, or to military life in camp or garrison. To deprive the army surgeon of any reasonable opportunity of practical advancement in his profession would surely be inflicting an injury upon the service generally, and especially upon those who have to depend upon him for professional aid. . . . It may not be out of place incidentally to state, that to prohibit a medical officer (when his public duties will permit) from extending relief to those of his fellow-citizens who may apply for his services—having confidence in his professional attainments—would be as ungracious to them as it would be devoid of the common dictates of humanity, and might afford as just and perhaps a better cause of complaint on the part of the neighboring community than the one alleged by yourselves, which relates exclusively to private interests. . . ."

Such was the language of an officer and a gentleman, addressed to some physicians at Sackett's Harbor, N. Y., and the high social and professional standing the officers of the medical corps of the army have always enjoyed will be sufficient proof that it is not their custom "to pirate outside of their posts."

The statement that there are too many surgeons for the number of troops is not supported by facts. It is true that at some stations the garrisons are small, but not every military post can be occupied by a large force. And even at such points it has been found much more satisfactory, for military reasons, to have the duties of post-surgeon performed by a regular medical officer or an acting assistant surgeon, than to employ a private physician, living in the vicinity, and pay him for each visit. Very respectfully, CADUCEUS.

ELECTROLYSIS IN STRICTURES.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In the issue of THE MEDICAL RECORD for July 26th, I see an article upon "Electrolysis in Stricture," by Dr. Streeter, of Rochester, N. Y., which seems to me so arbitrary in its dictum regarding the successful treatment by the above process, and this dictum seems to be so entirely based on the doctor's own unsuccessful experience, that I cannot but attempt a reply.

Having been the assistant of Dr. Robert Newman for the last four years, both in dispensary and private practice, I have had ample opportunity of convincing myself that he (Dr. Newman) is successful with this method, whatever experience others may have. It is very commendable to report our failures, as thereby we may profit and arrive at the truth. The conclusions, however, and comments the doctor arrives at through his failures are opposed to both logic and facts; so that the paper gives the impression as if it were a partisan one and not simply in the interest of science. If Dr. Streeter does not succeed with electrolysis it does not follow, by any means, that therefore electrolysis is a failure, but the fault should be looked for in the operator, not in the instrument. If one single person succeeds by the method (and there are scores on record who have succeeded), a thousand may fail, and without its affecting the fact that it can be done, in the least.

All recent text-books have acknowledged the success of electrolytic treatment, and give their authorities. Many respectable practitioners of standing, all over the country, have reported their cases for the last fifteen years, so that now it would be easy to collect one thousand cases. At the meeting of the American Medical Association in Cleveland, O., in 1883, one hundred successful cases were reported, which *had been under observation for from four to eleven years without a relapse.* Under such circumstances it is very unkind of Dr. Streeter to say: "No recognized authorities upon surgery or electricity have reported, etc."

Next, it is unfair to resuscitate the ten old cases of Dr. K——, in 1871. It has been shown why these cases were not a success in THE MEDICAL RECORD of July 15, 1872, and other articles. Besides, the present method and present knowledge of the electrolytic process as applied to strictures should not be compared with the rudimentary experiments of 1871.

Dr. Streeter also says: "In no other similar affections—stricture of the œsophagus, rectum, etc., have such results been claimed for electrolysis." Far from the mark! They have been claimed, and are on record. Strictures of the rectum have been cured by electrolysis (*New England Medical Monthly*, September, 1882), and a specimen was presented to the New York Pathological Society on April 10, 1872, which proved not only the complete cure of the stricture, but also that not the slightest relapse had taken place, to which the most learned and critical audience present could not take exception.

Butler and others have cured stricture of the œsophagus beyond any doubt, and even strictures of the Eustachian tubes have been treated successfully by M. J. Mercié in the clinic of Dr. Désarènes (*Medical News*, quarterly epitome, March, 1883). The method of Dr. Goruki for nasal strictures, as also that for those of the lachrymal ducts, are on record.

As to the operation of cutting strictures for a cure, Dr. Streeter cannot *assert* that he cured them permanently, he is only able to say he *thinks* he cured them, which is a praiseworthy modesty.

The success of electrolysis in the cure of strictures is such an established fact now, and proven by so many successful cases on record, and many more joyful specimens of humanity who own a restored urethral calibre, that these few words are simply meant to correct some misleading statements made in the article of July 26th.

Yours truly,

G. C. H. MEIER, M.D.

NEW YORK CITY.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August 3 to August 9, 1884.

GIBSON, J. R., Major and Surgeon. Granted leave of absence for one month and fifteen days. S. O. 36, Headquarters Division of the Atlantic, August 4, 1884.

HEIZMANN, C. L., Captain and Assistant Surgeon. Relieved from duty at Columbus Barracks, Ohio, and ordered for duty in Department of the East. S. O. 180, par. 2, A. G. O., August 2, 1884.

MCCREERY, GEORGE, First Lieutenant and Assistant Surgeon. Leave of absence extended two months. S. O. 180, par. 4, A. G. O., August 2, 1884.

HOPKINS, W. E., First Lieutenant and Assistant Surgeon. Granted one month's leave of absence with permission to apply for one month's extension. S. O. 67, par. 1, Headquarters Department of Arizona, August 1, 1884.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending August 9, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
August 2, 1884	1	24	35	3	94	22	0	0
August 9, 1884	0	26	35	3	76	28	0	0
Deaths.								
August 2, 1884	1	6	7	3	19	14	0	0
August 9, 1884	0	7	7	3	20	12	0	0

CHLORAL-QUININE. — A compound of quinine with chloral hydrate has been made by Dr. Mazzara by adding the chloral to an equivalent quantity of quinine dissolved in chloroform. By evaporating the solution and redissolving the residue in ether, the new compound may be obtained in warty crystals, which are said to be volatile at 149° C. and to make fluorescent solutions with acids.—*Lancet.*

SUPERNUMERARY TESTICLES.—Dr. W. S. Cheesman, of Auburn, N. Y., writes: "I have been a little surprised to observe the credence which THE MEDICAL RECORD gives to accounts of supernumerary testicles. Not one of these cases has been established by convincing evidence. Mere manipulation proves nothing, and THE RECORD'S informers seem to have applied no other test. Well do I recall a case illustrating the liability of even the most learned and acute to self-deception in this matter. In December, 1879, an Irishman was admitted to Ward 6, Bellevue Hospital, who, besides having two aneurisms of his aorta, appeared to have two testicles on each side. The whole resident staff went wild with enthusiasm, and proudly invited some of the more distinguished of the visiting staff to examine the curiosity. One and two at a time they came in, handled the specimens, and went away convinced and awed. Now it happened that a certain surgeon, hearing of the case and the credulity of his *confrères* with amazement, demanded of one of them (a great pathologist and diagnostician) if he actually believed this Irishman to have *four testicles*. The other, reaffirming his belief, good-humoredly advised his interlocutor not to talk about the case till he had examined it; whereupon the critic asked to be led to where the marvel lay. There were present at this fiery trial most of the hospital staff, and, I think, certain of the visiting Board also. The inquisitor having carefully manipulated the scrotum and its interesting contents, inquired of each individual in turn his opinion thereupon. When all had committed themselves to the opinion that the man had four testicles, he called for a candle, and then and there demonstrated that two of the bodies in question were *encysted hydroceles* of the cord. To make assurance doubly sure, I introduced a hypodermic needle into each cyst and evacuated its serum, whereupon the plump, round, firm pseudo-testis collapsed. Since that afternoon my opinions as to superfluous testicles have conformed strictly to the teachings of scientific medical literature, to the exclusion of the sensational evidence of mere manipulation, whether practised by myself or by any one else. Authors dismiss this subject with the verdict, *Not proven.* It is, of course, difficult to understand why, when women are now and then accorded the most liberal and varied multiplication of their generative apparatus, and when men are occasionally vouchsafed that embarrassment of riches, a double penis, there should not also occur undoubted cases of supernumerary testicle. Yet such is not the fact. All pretended abnormalities of the sort have, when submitted to rigid criticism, turned out to be cystic or fatty tumors, or what-not. Will not some one come forward with a dissected specimen (nothing less will carry conviction) of a scrotum containing three or more testes, and enroll his name beside that of the discoverer of a supernumerary moon?"

Dr. G. M. Burdett, of Lenoirs, Tenn., also writes: "An acquaintance of mine from Georgia has three testicles, but judging from his family none of them were supernumerary, according to Mr. Webster's definition of the word."

NOTES REGARDING THE PRESCRIPTION OF CORROSIVE SUBLIMATE.—Dr. G. G. Davis, of Trewsbury, N. Y., writes: "Corrosive sublimate, mercuric chloride, perchloride of mercury, the latest and best antiseptic, seems to be but little understood by the profession in general. Chemically, it is represented by $HgCl_2$, one mercury, and two chlorine. One atom of the latter element, not being entirely saturated by the Hg, tends to divorce itself and become free, to which fact the drug owes its potency. Great care should be taken in making it up into solutions, that the water should be filtered and distilled, or rain or snow water used in aqueous mixtures, or pure glycerine. These two articles are the best vehicles, and most convenient, and should always contain a little of some chloride, as common salt, hydrochloric acid, or chloride of ammonium, to keep the saturation continuous. I am aware that physicians prescribe this drug in alterative mixtures, tonics or syrups with vegetable extracts and such trash, which render the remedy perfectly inert. In fact, I know of but two very simple tinctures in which it may be prescribed and hold its virtues, viz.: gentian and cardamom. With tr. ferri chlor. and liq. acidi arseniosi of the new Pharmacopœia it forms a model remedy for pernicious anæmia. This is also a scientific mixture which will not decompose, and is a fair sample of a prescription for its internal administration. I would again call the attention of the profession to the avoidance of all *organic* materials in a mixture containing corrosive sublimate."

A CASE OF INTESTINAL OBSTRUCTION FROM TWISTING OF GUT—AUTOPSY.—Dr. P. T. Shillock, of Chaska, Minn., sends the history of a case of intestinal obstruction presenting several interesting points. The patient was a single woman aged twenty-eight, previously healthy, who had suffered for several days from colic and vomiting. She had taken several cathartic pills which acted sharply. Griping pains and vomiting continued, however, and she finally sent for the physician. Dr. Shillock found her suffering from abdominal pains and tenderness, tympanitis, and vomiting. Pulse, 106. Symptoms of obstruction gradually became more and more marked, and in three days she died from exhaustion. The use of morphine, anti-emetics, stimulants, cathartics, and enemata only gave temporary relief. Dr. Shillock writes: "On autopsy we found the obstruction to be caused by a double looping or twisting of the ileum, just a short distance from the ileo-cæcal valve. The stomach, small and large intestines were all much distended with gas. The large intestines were also quite congested, while the small intestines appeared normal, except at the point where twisting took place, being there of a dark red color. No evidence of peritonitis was present, and all the other viscera appeared to be normal. Points of interest in this case that seem to make it worthy of being reported were as follows: 1, The vomited material had only a very slight fecal odor on the last two days of the case; 2, apparent slight causation for such a serious condition; 3, setting in of menstruation only two days before her death; 4, equal distention of intestines both above and below obstruction, and passage of flatus during latter part of case."

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Original Articles.

THE NATURAL PRODUCTION OF MALARIA, AND THE MEANS OF MAKING MALARIAL COUNTRIES HEALTHIER.

AN ADDRESS DELIVERED AT THE EIGHTH SESSION OF THE INTERNATIONAL MEDICAL CONGRESS, COPENHAGEN, AUGUST 12, 1884.

BY CONRAD TOMMASI CRUDELI, M.D.,

PROFESSOR OF HYGIENE, UNIVERSITY OF ROME, ITALY.

(Special for THE MEDICAL RECORD.)

GENTLEMEN: Before entering upon my subject I must crave the indulgence of those of my colleagues whose language I have borrowed for any Italicisms that I may use, as well as for the foreign accent which must strike their ears more or less disagreeably. Desiring to respond as well as lay in my power to the invitation with which I have been honored to discuss the hygienic questions relating to malaria, I have chosen the French language as being the one in which, apart from my mother tongue, I could express myself with the greatest ease and precision.

I shall be pardoned also, I hope, for having employed the terms "malaria" and "malarial districts" in place of the more commonly used expressions "paludal miasm" (*miasme paludéen*) and "marshy regions" (*contrées marécageuses*). The substitution is not a happy one from a literary point of view, but I have made it deliberately and for the following reason: The idea that intermittent and pernicious fevers are engendered by putrid emanations from swamps and marshes is one of those semi-scientific assumptions which have contributed most to lead astray the investigations of scientists and the work of public administrations. This idea, so widespread and so well established by the traditions of the school, is radically false. The specific ferment which engenders those fevers by its accumulation in the atmosphere which we breathe is not exclusively of paludal origin, and still less is it a product of putrefaction. Indeed, in every region of the globe between the two arctic circles there are swamps and marshes, steeping-tanks of hemp and flax, large deltas where salt and fresh waters mix, and yet there is no malaria there, although putrid decomposition is on every side. On the other hand, in the same parts of the globe there are places which are not, and never were marshy, and in which there is not the least trace of putrefaction, but which, nevertheless, produce malaria in abundance. I reject, therefore, wholly the paludal assumption, and in order to express this view in the title of my paper, have been forced to employ terms which to my hearers may sound like Italicisms.

The Italians generally have not this paludal notion, for experience taught them long ago that malaria is produced nearly everywhere; in marshy districts as well as in those which might almost be called arid; in a volcanic soil as well as in the deposits of the miocene and pliocene periods and the ancient and modern alluvia; in a soil rich in organic matters as well as in one containing almost none; in the plains as well as on the hills or mountains. The word malaria (bad air), which it is the sad privilege of Italy to have lent to all languages to express the cause of intermittent and pernicious fevers, represents then, among the majority of our rural populations, the idea of an agent which may infect any sort of country, whatever may be its hydraulic and topographical conditions and whatever may be its geological formation. This word, therefore, is the one best suited to designate this specific ferment in question, and I have on this account employed it and its adjectival derivatives in order not to resuscitate the idea of the exclusively paludal origin of the morbific agent.

I shall not tarry long to speak of the nature of this ferment, for the studies bearing upon that point, although far advanced, are not yet completed. I may remark, however, that the idea that the ferment is formed of living organisms is a very old one, and has not arisen suddenly because of the modern theories of the parasitic nature of disease. From the time of Varrar (who believed that malaria was made up of invisible mites suspended in the atmosphere) to our own day this theory has been several times advanced by hygienists. Independently of the general considerations which led Rasori, and later Henle, to formulate the doctrine of the *contagium vivum* of infection (long before the progress of microscopical science had revealed the existence of living ferments), there were peculiar circumstances as regards malaria which should have impelled minds to look in that direction, even in times long past.

Some of these circumstances are of a nature to strike every serious observer, and deserve a few moments' attention. How could one maintain, for example, that this ferment is a product of chemical reactions taking place in the ground, when it is seen to remain constantly the same whatever may be the composition of the soil from which it emanates! As long as the paludal theory held sway the chemical interpretation of this identity of the product in every latitude was easy. Rica does not hesitate to admit that when a swampy tract is heated by the sun's rays to the necessary point for the putrid decomposition of the organic matters contained in it, the "chemical ferment," or rather the "mephitic gases," to which is attributed the morbific action, are developed, whatever may be the distance from the equator at which this marshy region lies. But since it has been ascertained that malaria is produced in soils of the most varied chemical composition, *the persistent identity of this product* has become chemically inexplicable; while it is however readily conceivable, if one admits that malaria is an organized ferment which easily finds the necessary conditions for its life and multiplication in the most varied soils, as is the case with millions of other organisms vastly superior to the rudimentary vegetables which constitute the living ferments.

The same thing may be said of *the progressive intensity of the morbific production in abandoned malarious districts.* This fact has been historically proven in several parts of the earth, and especially in Italy. A large number of Grecian, Etruscan, and Latin cities, even Rome itself, sprang up in malarious territories and attained a high state of prosperity. First among the reasons for this success must be placed the works undertaken with a view of rendering these places more salubrious, and which lessened the evil production, *but almost never extinguished it completely.* After the abandonment of these localities, the production of malaria recommenced in a degree which went on increasing from age to age, and which has rendered some of these places actually uninhabitable. This was seen, in the time of the ancient Romans, in Etruria, when it was conquered and laid

waste, and in several parts of Magna Græcia, and of Sicily. From the fall of Rome even to the present day, this phenomenon has been manifested in a very evident manner in the Roman Campagna, in certain parts of which, even up to the time of the Renaissance, it was possible to maintain pleasure houses, but which are now uninhabitable during the hot season. In many cases the physical conditions of the soil have undergone no appreciable change during centuries, so that it is impossible to attribute so enormous an augmentation of malaria to an increase in its annual production, itself increased by a progressive alteration of the chemical composition of the soil. But if, on the contrary, it be admitted that malaria is caused by a living organism whose successive generations accumulate in the soil, the interpretation of this fact becomes very simple.

There are, finally, *peculiarities in the local charging of the atmosphere with malaria* which can be explained only in this manner. If the malarial miasm were composed of gaseous bodies emanating from the soil, or rather of chemical ferments formed beneath the ground and raised into the air by gases or watery vapor, the charging of the atmosphere with the specific poison ought to arrive at its maximum during the hottest part of the day, when the ground is heated the most by the sun's rays and when the evaporation of water and all chemical actions attain their maximum intensity. But this is very different from what actually occurs. The local charging of the atmosphere is always less strong during the meridian hours than at the beginning and the end of the day, that is to say, after the rising, and especially after the setting, of the sun. Now it is precisely at these hours that the difference between the temperature of the lower layers of the atmosphere and that of the surface of the ground is the greatest, and that the ascending currents of air starting from the ground are the strongest. If malaria consists of solid particles contained in the soil, one may readily understand how their elevation *en masse* into the atmosphere should take place especially at these two periods of the day.

All these facts, which can be easily verified if the subject of malaria be studied on the spot and without any preconceived notions, explain the tendency which has always been manifested to attribute this specific poisoning of the air to a living organism which is multiplied in the soil; and they also explain the ardor with which hygienists have applied themselves to the production of the scientific proof.

Unfortunately the investigations undertaken for this end have for a long time been fruitless, for the preconceived paludal theory has led investigators to occupy themselves exclusively with the inferior organisms inhabiting marshes. Among these organisms they studied especially the *hyphomycetes*, which had already acquired so great an importance in dermatology; and their entire attention was concentrated upon the aquatic algæ, without even taking the precaution to determine whether the varieties which they thought to be malarial were found in all malarious swamps, or whether they were capable of living within the human organism. It has thus happened that each observer has indicated as the cause of malaria a different variety of alga, whichever he found to be most abundant in the swampy ground that he had to examine. Thus Salisbury has indicated the *palmella gemiasma*, which is found with us in places perfectly free from malaria, while it is often wanting in malarious marshes in the centre of Italy; Balestra, a species of alga which is as yet indeterminate; Bargellini, the *palmoglœa micrococca;* Safford and Bartlett, the *hydrogastrum granulatum;* and Archer, the *chitonoblastus œruginosus*. There is not a single one of these species the parasitic nature of which has been demonstrated; and as regards the two last named varieties, it can be positively denied that they are capable of producing a general infection, for the diameter of their spores and filaments is greater than that of the capillary blood-vessels.

It was only in 1879 that Klebs and myself, after having been thoroughly freed, by a long series of preparatory studies, from the unfortunate paludal idea, undertook together some investigations in malarious districts of the most varied character, marshy and not marshy. We employed the system of fractional cultivation, making experiments on animals with the final products thus obtained. We felt ourselves justified in recognizing the malarial ferment in the *schizomycete bacillus*. The numerous researches made subsequently by us, and by many other observers, in the soil and in the air of several malarious localities, as well as in the blood and in the organs of men and animals specifically infected, have put it henceforth almost beyond doubt that we really have to do with a schizomycete. Very recently, MM. Marchia fava and Celli have succeeded in demonstrating that the germs of this schizomycete attack directly the red blood-globules, and destroy them, causing them to undergo a series of very characteristic changes which admit of easy verification, and which render certain the existence of a malarial infection.

Several observations made recently in Rome tend to demonstrate that the schizomycete of malaria does not always assume the complete bacillary form described by Klebs and myself; but this morphological question possesses no further interest for the hygienist. For him the essential thing is to know that he has to deal with a living ferment which can flourish in soils of very varied composition, and without the presence of which neither marshes nor stagnant pools of water are capable of producing malaria.

We must not think, however, that all earth containing this ferment is capable of poisoning the superjacent atmosphere. Popular experience, certain modern scientific investigation, and the facts which one can often verify when the soil, which was malarious in ancient times and which has since ceased to be so, is turned up to a great depth, all agree in proving that the ground remains inoffensive as long as it is not placed in certain conditions indispensable for the multiplication of this specific ferment. Up to this point the organism lives, so to speak, in an inert state, and may remain so during centuries without losing any of its deleterious power. There is nothing in this fact that ought to surprise us, since we know that the life and the power of evolution belonging to the seeds of plants of a much higher order than these vegetable organisms constituting ferments, may remain latent for centuries, and may then revive at once when these grains are placed in the conditions suitable for their germination.

Among the conditions favorable to the multiplication of the malarial ferment contained in the soil, and to its dispersion through the superjacent atmosphere, there are three which are absolutely essential, and the concurrence of which is indispensable for the production of bad air (malaria). First, a temperature which does not fall below 20° C. (67.5° F.); next, a very moderate degree of permanent humidity of the soil; and finally, the direct action of the oxygen of the air upon the strata of earth which contain the ferment. If a single one of these three conditions be wanting, the development of malaria becomes impossible. This is a point of prime importance in the natural history of malaria, and it gives us the key to most of the methods of sanitary improvement attempted by man.

Let us see first what can be done in this direction without the labor of man. For nature herself makes localities salubrious by *suspending* for a greater or less time the production of malaria. It is thus that winter brings about in every country a freedom from malaria which is *purely thermic*, for it is due simply and entirely to a sinking of the temperature below the required minimum. Indeed, if the temperature in winter rises above this minimum, there are often sudden outbreaks of malaria. Sometimes, during very warm and dry summers, the heat extracts all the humidity from the malarious soil, and thus procures for us a freedom from the disease,

which is *purely hydraulic*. This may continue for a long time (as happened in the Roman Campagna during the years 1881 and 1882), but may also be completely destroyed by a single shower. Nature also sometimes renders a district healthy in a manner *purely atmospheric*, by covering a malarious soil with earth which does not contain the malarial ferment, or with a matting formed of earth and the roots of grasses growing closely together in a natural meadow.

In the attempts of purification by suspending the malarial action, which have been devised by man, the same thing has been done; that is to say, it has been sought to eliminate at least one of the three conditions essential to the development of the specific ferment contained in the infected soil. Naturally, they have not thought of bringing about a thermic purification, such as nature produces in winter, because of the impossibility of moderating the action of the sun; but they have tried from all time to procure hydraulic or atmospheric purifications, and sometimes to combine these together in a very happy way.

The hydraulic systems are very numerous, for the problem which is presented, namely, that of depriving the ground of its humidity during the hot season, necessitates different solutions according to the nature and the bearing of the soil. Sometimes this is done by digging open or closing ditches intended to draw away large bodies of water. At other times a system of drainage is established, by means of which the water is drawn out of the earth and its level is depressed, so that the upper malarious strata, exposed to the direct action of the air, are deprived of moisture during the hot season. This system of drainage is not a modern invention; the Italian monks understood it as well as, and even better than, we do. In deep and loose soils they used sometimes, just as we do now, porous clay pipes; but when the subsoil was formed of compact and nearly impermeable matters, they employed a system of drainage, the extent and grandeur of which astonishes us. It is that of drainage by cavities, applied by the Etruscans, Latins, and Volsci to all the Roman hills formed of volcanic tufa, the tradition of which I have found still preserved in some countries of the Abruzzi.

We may sometimes establish a double drainage, from below and from above; that is to say, to drain the subsoil, and at the same time increase the evaporation of water from the surface of the ground. It is well known that clearing off the forests of malarious countries has often proved an excellent means of making lands salubrious which were before too damp; for, by removing every obstacle to the direct action of the sun's rays upon the ground, we cause an increase of evaporation from its surface, and may thus be enabled to exhaust the superficial strata completely of their water during the hot season. In very moist lands which lend themselves readily to deep drainage, the combination of the latter with a clearing of the surface has, in almost every quarter of the globe, rendered possible a very widespread and sometimes quite lasting freedom from malaria. But, although a nearly universal experience proclaims this fact, there is a school which, following in the footsteps of Lancisi, maintains the contrary opinion, that it is necessary to preserve the forests in malarious districts, and even to increase their extent, since the trees filter the infected atmosphere and arrest the malaria in their foliage. This strange theory was formulated by Lancisi in 1714, on the occasion of the proposed clearing of a forest belonging to the Caetani family, and lying between the Pontine Marshes and the district of Cistema. Lancisi was completely imbued with the paludal notion, and consequently believed that the very severe malaria of Cistema was brought by the winds from the coast marshes, instead of being produced in the soil surrounding the district, which was then covered by this forest. He believed then that the forest acted as a protective rampart, and he prevented its being cut down. But toward the middle of the present century the Caetani had the woods cleared off from the entire belt of land surrounding Cistema. Twenty years later I was able to show that Cistema had gained greatly in salubrity. I published my observation in 1879, and, naturally, was taken to task rather sharply in the name of the sacred tradition. Happily these recriminations led our Minister of Agriculture to have the question studied by a special commission. This commission, after a conscientious examination extending over three years, of all the malarious localities in the province of Rome, has just published its report,[1] the conclusions of which are entirely in accord with the facts of universal experience. They were not able to verify a single fact in support of Lancisi's theory, while they found many of the same nature as that of Cistema, and which have resulted in overturning the theory entirely.

It has also been thought possible to practise drainage from above by means of plantations of certain trees which would draw considerable moisture from the earth, a method which might really be serviceable in some malarious districts. But in accordance with the idea that malaria is a product of paludal decomposition, the trees selected have almost always been the *eucalyptus*. It has been maintained that trees of so rapid a growth ought to drain the soil very actively, and also that the aroma of their foliage ought to destroy the miasmatic emanations. I have hitherto been unable to verify a single instance of the destruction of malaria by eucalypytus plantations, but I do not consider myself justified in denying the facts which have been stated by others. There is nothing to oppose the admission that these plantations, when properly made, may sometimes have been of great utility. I maintain frankly, however, that they have not always been so, and that it is necessary to guard against the exaggerations into which some have allowed themselves to fall in recent times. Such exaggerations might have been avoided if, instead of talking about these plantations on the basis of a theoretical assumption, the results only had been studied in places where the eucalyptus abounds. It would then have been known that even in the southern hemisphere, the original home of the eucalyptus, there are eucalyptus forests which are very malarious. This fact has been demonstrated by Mr. Liversige, professor in the University of Sydney, Australia. Among us also, although everybody was convinced by the statements of the press that the locality of the Tre Fontane, near Rome, had been freed from malaria by means of the eucalyptus, people were disagreeably surprised by an outbreak of very grave fever occurring throughout the whole of this colony in 1882, a year in which all the rest of the Roman Campagna enjoyed an exceptional salubrity. If, alongside of these hygienic uncertainties, we place the agricultural uncertainties, we must conclude that it is necessary to contend strongly against this fanatical prejudice in favor of the eucalyptus-tree. These plants are, in fact, very capricious in their growth. In full vegetation during the winter in our climate, they are often killed instantly by a sharp winter frost, by damp cold, by the frosts of spring, or by other causes which the botanists have not yet been able to determine. At other times, if the winters are very mild, these plants grow too rapidly in height and then are broken short off by moderately strong winds. It should further be mentioned that these plantations are sometimes very expensive. In fact, if the earth contains too much water it must be drained under penalty of seeing the roots of the eucalyptus rot. Then again, if the subsoil is compact, it is necessary to dig deep trenches in order to give room to the long roots of these trees, and often indeed these trenches must also be drained, as is done for olive-trees. The conclusion evidently is that it is better to confine ourselves to hydraulic methods of promoting the healthfulness of a locality, the immediate effects of which are

[1] Della influenza dei boshi sulla malaria dominante nella regiona marittima della provincia di Roma. Annali di Agricoltura, No. 77, 1884. Roma: Eredi Botta.

less uncertain. And then, when the local conditions are such as to make it desirable to try the effects of plants possessed of strongly absorbing powers, it is better to choose them from among the flora of our own hemisphere. This is more sure and will cost less.

Simple hydraulic methods of purification, even the most perfect, do not, however, produce permanent hygienic effects, since the moisture necessary for the multiplication of the malaria in the soil is so slight that these effects may be compromised by anything whatever that is capable of restoring a moderate degree of humidity to the ground during the hot season. It has often been thought that a suspension of malarial production would be better assured by suppressing at the same time the humidity of the soil and the direct action of the oxygen of the air upon the superficial strata of earth which contain the ferment. This has been successfully accomplished by the system of overlaying (*comblées*). This consists in covering the infected soil by thick layers of uninfected earth, carried there either by the muddy waters of rivers or by the hand of man. At the same time the steady drainage of the surface and underground water is provided for. Last year, I advised our Minister of War to undertake in another form an hydraulico-atmospheric purification of the district of the Janiculum surrounding the Salviati palace on the via della Longara, by draining the soil carefully and covering with a layer of very close turf all the parts of the surface which could not be macadamized. It would seem as if this system had been rather successful, since there has not been this year a single case of fever in the *personnel* of the new military college, established in the Salviati palace ; while in the Corsini palace, which is situated on the same side of the via della Longara, but which looks out upon that part of the Janiculum which is still uncovered, there have been some fatal cases of fever.

Furthermore, we have had in Rome, during the past few years, some very evident proofs of the efficacy of atmospheric methods of purification. I will confine myself to the relation here only of the most striking instance, one which has been furnished us in the building up of new quarters of the city. There was much discussion at first as to whether the improvements should be undertaken in the parts where they now are or in the valley of the Tiber, for the uncovered lands of the Esquiline and of the Quirinal were malarious, and, as nearly everybody then thought that the malaria of Rome was carried into the city from the coast marshes, it was supposed that this state of things was irremediable. We opposed to this view the fact of the salubrity of the Viminal, which is situated between the Esquiline and the Quirinal, and which ought to be as unhealthy as the two other hills were the malaria of the latter imported into the city instead of being indigenous. Believing it to be indigenous, we hoped that by shielding the surface of these hills from the direct action of the air (by building houses and paving the streets), the malaria would cease to be produced there. That is precisely what has happened, for the new quarters are very healthy. But the malaria is only held in abeyance and is not definitely overcome ; for if an extensive excavation is made in these hills, and the contact of the air with the malarious soil is thus re-established, during a hot and damp season, the production of malaria commences anew. A complete atmospheric purification is nevertheless the most stable of all the methods of obtaining a suspension of malarial production, but unfortunately its realization is very limited, for it is restricted to inhabited localities and to sodded surfaces.

The ideal method of insuring freedom from malaria should be to obtain a permanent immunity, that is, to be able to modify the composition of the infected soil in such a way as to make it sterile as regards malaria, without taking from it the power of furnishing products useful for the social economy. But all the elements indispensable for obtaining such a result fail us utterly just here. We do not yet know what ought to be, in general terms, the composition of a soil incapable of producing malaria, yet retaining those properties which are suitable for vegetation. When we shall have arrived at this first stage, there will still be a long road to travel ; and the most difficult part will be to discover a practical means of imparting this salutary composition to all the numerous varieties of malarious soils.

Scientifically, then, in the present state of our knowledge, we are unable to affirm anything on this point. Practically, we are not much further advanced. It is very probable that the combination of hydraulic purification with a forced cultivation of the soil has sometimes determined changes in its composition by which it has been rendered sterile as regards malaria. If that has happened, it has happened by chance, and we are unable to reproduce the result at will ; for we have not all the data which might enable us to understand how it has come about. Most of the purifications obtained in ancient times, by means of forced cultivation, continued during centuries, have not been definite at all, but the production of malaria has been simply suspended. Hardly was the regular cultivation of the fields interrupted than the production of malaria recommenced. Among the numerous examples that I might cite in this connection, I will limit myself to that of the Roman Campagna. This seemed to have been made permanently healthy under the Antonii, but after the fall of the empire it began again to produce malaria, as if the forced cultivation through so many centuries had never been.

One might, strictly speaking, be content with such a result, and boldly undertake forced cultivation of all malarious districts, without stopping to ascertain whether the freedom from malaria so obtained would be definite, or whether the production of the poison were only suspended. Unfortunately one is never sure of arriving at such a result, and no one can say *à priori* whether the forced cultivation of a given malarious tract will render it healthful. It must always be remembered that the first effect of forced cultivation, which requires an overturning of the soil by means of the plough, the spade, and the pick, is an unfortunate one, from a hygienic point of view, whenever we have to deal with a malarious country. Experience has shown, especially in Italy and America, that this overturning of the soil almost invariably increases the local production of malaria. And this can be readily understood, since the ploughing and the digging in a soil containing the specific ferment increases the extent of surface of the ground in immediate contact with the atmosphere. This first mischievous effect is often gradually weakened by the continued cultivation, and may end by disappearing. At other times, on the contrary, it persists obstinately, and one is often forced in desperation to the resolve to level the ground again and to varnish it, so to speak, with a thick sowing of grass, if he wishes to suspend or weaken the malarial production.

However, when the local conditions will permit, it is well to try whether, by means of forced cultivation of the soil, it may not be possible to increase the efficacy of the hydraulic method of procuring immunity from malaria, or of the hydraulico-atmospheric method of "overlaying." The moment that it is known that this cultivation has frequently been advantageous, there comes forward a crowd of social reasons which induce us to attempt it, even though we be persuaded that we are about to engage in a game of chance. But to dare to attempt it is not all that is necessary, we need also the possibility of so doing, and just here we find ourselves in a vicious circle from which it is not easy to emerge. Forced cultivation cannot be accomplished without the presence of agriculturists in the region during the entire year ; and the agriculturists cannot remain in the region during the fever season, for they run thereby too great a risk. For the solution of this question there is but one means : *try to increase the power of resistance of the*

human organism to the attacks of the malaria. It is to a search after the means of accomplishing this result that I have devoted myself during the past few years.

There is nothing to hope for, as regards malaria, in acclimation. *Individual acclimation* is, and always has been, impossible. The malarial infection is not one of those a first attack of which confers immunity from other attacks. It is, on the contrary, a progressive infection, the duration of which is indeterminate, and which is of such a nature that a single attack may suffice to ruin the constitution for life. Collective or *racial acclimation* certainly existed in the past, at a time when specific remedies for pernicious malaria were unknown; and even later, when the employment of these remedies was very limited. The acclimation was due to a natural selection made by the malaria upon successive generations, from which it took away, almost without opposition, all those who possessed but a feeble individual power of resistance to the specific poison, while it spared those who possessed this power of resistance in an extraordinary degree. The first were, according to the Grecian myth, *the human victims destined to appease the monster, or demon, who opposed the violation of the territory over which he had up to that time exercised an absolute sovereignty.* The second became the founders of the race, and through them, from generation to generation, the collective power of resistance to the malaria was progressively increased. In our own days a like selection may take place among barbarous races, as it does among the cattle and the horses in a malarious region, but it has become an impossibility among civilized nations. By means of the specific remedies which we possess, the use of which is now so general, the lives of a large number of individuals whose resisting powers are very feeble are preserved; and these individuals beget others whose power of resistance to the action of the specific poison is still more feeble. This results, after a number of generations, in the physical degradation of that part of the human race which inhabits malarious countries.

We cannot, therefore, in the future, count upon the assistance of external natural forces to increase the power of resistance of human society against the assaults of malaria. Such an object can be obtained only by artificial means. It has been sought to attain this end by the daily administration of the salts of quinine, of the salicylates, and of the tincture of eucalyptus, each and every one tried in turn. But the salts of quinine are dear, exercise a prompt, though very transient, anti-malarial action, and, when administered for a long time, disturb rather seriously the functions of the digestive and nervous systems. The salicylates, when well prepared, are rather dear, and there is as yet no proof that they possess prophylactic powers against malaria. The alcoholic tincture of eucalyptus is useful in malarious regions (as are all the alcoholics, beginning with wine) in quickening the circulation of the blood; may it, perhaps, also act as a preservative against light attacks of malaria? Possibly. But it is very certain that it possesses no efficacy in places where malaria is severe. It will suffice to prove this to recall the two epidemics of fever which afflicted the colony of the Tre Fontane, near Rome, in 1880 and 1882. Everybody was attacked, and there were several cases of pernicious fever, although a good preparation of eucalyptus is manufactured in the place and is distributed largely to the colonists during the dangerous season of the year.

Having several times had occasion to observe, in malarious regions, that when recourse was had to arsenic in order to subdue fevers, over which quinine had exerted almost no effect, relapses occurred but rarely; and having been able to satisfy myself that the arsenical treatment sometimes procured a permanent immunity in individuals who are subject to frequent attacks of malaria, I began in 1880 to employ arsenic (arsenious acid) as a prophylactic in certain portions of the Roman Campagna. This remedy was indicated, in an experiment of this sort, not only by reason of its durable anti-malarial effects, but also by its low price, by the beneficial influence which it exerts upon all the nutritive functions, and because it has no disagreeable taste and may therefore be given to everybody, even to children. My first trials in 1880 were rather encouraging, and I felt myself justified in engaging some proprietors and the association of our southern railroads to repeat the experiments on a large scale the following year, recommending them, however, to use arsenic in a solid form as offering an easy and certain dosage. This extensive prophylactic experiment began in 1881, and acquired constantly increasing proportions in 1882 and 1883, which have become still larger this year. An experiment of this kind is not easy to conduct in the beginning. The name, arsenic, frightens not only those whom we desire to submit to its action, but also the physicians, whose exaggerated fears have sometimes rendered the experiments of no avail, since they were conducted too timidly and the doses of arsenic employed were altogether insufficient. But some intelligent men, especially M. Ricchi, physician-in-chief to the southern railroads, were able speedily to triumph over these obstacles, and to place the experiment on a firm basis. The general testimony of all the facts which they have collected tends really to prove that, when the administration of arsenic is begun some weeks before the presumed season for the appearance of the fever, and when it is continued regularly throughout the whole of this season, the power of resistance of the human organism to malaria is increased. Many individuals gained thereby a complete immunity, others a partial immunity, that is to say, they were sometimes attacked by the fever, but it never, even in very malarious districts, assumed a pernicious form, and was easily subdued by very moderate doses of quinine. Last year, for example, in the district of Borino, where the malaria is very severe, M. Ricchi experimented upon seventy-eight employees of the southern railroads, dividing them into two equal divisions, one of which received no prophylactic treatment, while the other was submitted to a systematic arsenical treatment. At the end of the fever season it was found that several employees among the first half had been attacked by fevers of a severe type; while thirty-six of those in the second division had enjoyed a complete immunity, the three others having been attacked, but so lightly that they cured themselves by quinine without seeking medical aid.

Facts of this sort are very encouraging, and the more so as the general health of those submitted to the prophylactic treatment was much improved. It was found almost invariably, upon the termination of the experiment, that there had been an increase in bodily weight and an amelioration of the anæmia which is so common in malarious districts. But, in order to arrive at such results, it is necessary to be at once bold and prudent. On the one hand, it is necessary to graduate very carefully the daily dose, never exceeding at the commencement the dose of two milligrammes ($\frac{3}{10}$ grain) per diem for adults, and never giving the arsenic upon an empty stomach. On the other hand, it is necessary to gradually push the dose up to ten or twelve milligrammes ($\frac{15}{100}$ or $\frac{18}{100}$ grain) a day for adults, in districts where the malaria is very severe, giving the arsenic in such a way that there is never an accumulation of the drug in the stomach. Most of the experiments which have been undertaken this year are being conducted on this plan, and there is reason to hope that they will give satisfactory results.

We must not, however, rest here if we wish to attain promptly the end proposed, namely, that of planting colonies in malarious districts without exposing the colonists to grave danger. Even if we realize perfectly the hope which I conceived in 1880, and if we are enabled to prove that arsenic increases man's power of resistance to the assaults of malaria, we must not imagine that everything is accomplished. It will take a long time before the use of a preservative method of this kind becomes

generalized, we have first to contend against the fear which nearly every one experiences when arsenic is mentioned, and then there will also be difficulty in establishing everywhere a proper control over its administration. In every attempt at the colonization of malarious regions it will be necessary to combat for a long time the diseases caused by malaria, and we must seek for a method of combating them by a means which is in the possession of everybody, and which shall not be dangerous to the general economy of the human organism. Those who do not know from actual experience the miseries of a malarious country, think only of combating the acute forms of infection, which often place the patient in danger of death. But this danger, though great, is for the most part imaginary, provided that assistance be obtained in time. But that which desolates families, and which causes a physical degradation of the human race exposed to the attacks of malaria, is the chronic poisoning, which undermines the springs of life and produces a slow but progressive anæmia. This infection often resists all human therapeutic measures, and is even aggravated by the use of quinine, which is given during the recurrent paroxysms of fever. Quinine is, when given for a long period of time, a true poison to the vaso-motor nerves. The question, then, is to replace quinine, and the alkaloids which possess an analogous physiological action, by an agent the efficacy of which against chronic malarial poisoning may be greater and the dangers of its employment less.

A happy chance has led Dr. Magliori to the discovery of an agent of this sort, which was traditionally in use by certain Italian families. It is an exceedingly simple thing—merely a decoction of lemon. It is prepared by cutting up one lemon, peel and all, into thin slices, which are then put into three glassfuls of water and the whole boiled down to one glassful. It is then strained through linen, squeezing the remains of the boiled lemon, and set aside for some hours to cool. The whole amount of the liquid is then taken fasting. It is well known that in Italy, Greece, and North Africa, they often use lemon juice, or a decoction of lemon seeds, as a remedy in malarial fevers of moderate intensity; and in Guadaloupe they use for the same purpose a decoction of the bark of the roots of the lemon tree. All these popular practices tend to show that the lemon tree produces a febrifuge substance, which resides in all parts of the plant, but which would seem to be most abundant in the fruit. In fact, among the popular remedies employed against malarial infection, that which I have just described is the most efficacious, for it can be employed with good effects in acute fevers. But it is especially advantageous in combating the chronic infection, which is rebellious to the action of quinine, and in removing or moderating its deplorable effects."

Hardly had I learned of this method of medication, when I hastened to induce some proprietors in the Roman Campagna to try it with their farm hands; and, after witnessing the good results there, I endeavored to persuade practitioners to make a trial of the same treatment. I was ridiculed a little at first, for they thought it rather singular that a professor should be trying to popularize an old woman's remedy. In reply to that I answered that practical medicine would not have existed, had it not known how to treasure up from age to age the facts of popular experience; and I ventured to remark that, had the Countess de Chinchon waited until methodical researches had been made into the physiological action of cinchona bark, before popularizing the remedy, the use of which she had learned from the semi-barbarous Peruvians, in all probability humanity would still, as regards malaria, be dependent upon the medication practised in the middle ages. Happily these arguments had the desired effect upon certain distinguished practitioners, some of whom, especially in Sicily and Tuscany, have already collected together a tolerably large number of very encouraging observations. One of them, Dr. Mascagni, of Avezzo, tried the remedy in his own person, and succeeded in promptly curing an obstinate malarial fever which had resisted the action of quinine.

Gentlemen, in dealing with malaria we ought always to hold popular experience in high esteem, for we owe much to it. We owe to it the fact that we have been liberated from the paludal idea, and furthermore, that we have learned that it is often better, instead of trying to prevent the importation, for the most part imaginary, of malaria from distant marshes, to suppress its production in the soil under our feet or in that immediately surrounding us. We owe to it the knowledge, which we now have, that malaria rises up into the atmosphere only to a limited height, so that by placing ourselves a little above this limit in order to eliminate the possibility of the malaria being carried up to us by oblique atmospheric currents, we are enabled to breathe an air which does not contain this ferment, or which contains it only in insignificant amounts; thus one may even sleep in the open air during the night in very unhealthy districts without running any risks. The knowledge of this fact has led some peoples of Greece, and the inhabitants of the Pontine Marshes, to sleep in the open air on platforms raised on poles four or five metres (twelve to fifteen feet) in height. Some people in the Roman Campagna have built houses for themselves on top of the ancient tombs, the walls of which are perpendicular; the American Indians fasten their hammocks as high up as possible to the trees of the malarious forests; and very recently, the engineers of the Panama Railroad had little wooden huts built in the trees in order to procure safety against the terrible outbreak of malaria which occurred during the construction of that iron way. We owe, finally, to this popular experience the discovery of the specific action of quinine, and the consequent preservation of thousands and thousands of human lives. Why should we reject *à priori* and without investigation other useful data which it may yet present to our consideration? If we wish to make progress in this question of rendering malarious countries healthy, we must always hold before our eyes a double object: to find a means of prophylaxis which may be accessible to everybody; and, at the same time, to find a means, equally within everybody's reach, to overcome chronic malarial poisoning and its evil consequences. Science is still too far behind to permit us to hope that we shall soon succeed in discovering this second means by purely scientific researches. We ought, therefore, to gather together with great care all the facts which point to the possibility of a solution of this problem, and if the measures to which these facts point seem to be incapable of doing harm, we ought to try them boldly, and not be restrained by a false idea of the dignity of science. The social importance of the problem is too great to allow of its solution being retarded by the fear that scientific men may be accused of having been outrun by the ignorant. True science has none of these puerile susceptibilities; on the contrary, it deems it an honor to be able to seize all the observations of fact, whoever may have been their first recorder, to put them to the crucial test of methodical experiment, and to convert them into a new stepping-stone on the march of human progress.

Typhoid Fever and Tuberculosis.—Dr. Gral denies the existence, advanced by some authors, of an antagonism between tuberculosis and typhoid fever. If typhoid fever, he says, attacks a tuberculous subject, it does not run an abnormal course, but the tuberculosis assumes an acute character in consequence. Typhoid fever may be a cause of tuberculosis by creating a predisposition in the patient to this disease. In the stage of convalescence especially, the tubercular process often becomes very active.—*Deutsche Medicinal-Zeitung*, June 2, 1884.

FOOD RATIONS, IN HEALTH AND DISEASE, OF PERSONS CONFINED IN THE HOSPITALS, INFIRMARIES, AND PRISONS OF DIFFERENT COUNTRIES.

An Address Delivered at the General Session of the International Medical Congress, Copenhagen, August 15, 1884.

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(Special for The Medical Record.)

Physicians have hitherto devoted too little attention to the study of the proportions, both absolute and relative, of the albuminoid matters, fats, and hydrocarbons contained in the diet of the sick, the infirm, and prisoners, as well as in the separate dishes of which this diet is composed. A knowledge of these proportions is indispensable in establishing a rational dietetic régime for the sick, and also in determining whether the food, which is supplied according to fixed rules to the inmates of public institutions, is of a sufficiently nourishing character.

The objections which have been raised against the correctness of the average food rations, established by Voit and other physiologists as suitable for healthy individuals in good nutritive condition, are not well founded. The determination of the quantity of the albuminoid substances, fats, and hydrocarbons contained in the regular diet lists of hospitals, infirmaries, etc., is a powerful means of effecting improvements and reforms in the alimentation of the individuals supported in these institutions. But it is essential in all such calculations to observe every precaution necessary in order to obtain comparative results. Similar calculations regarding the different varieties of diet of patients confined in hospitals would be of great value as a means of recognizing and estimating the differences of opinion which still obtain concerning the alimentation of the sick, among physicians of the present day, in various countries.

Convinced of the great importance of this subject, the author advanced the following propositions:

First.—Endeavor to obtain information as complete as possible concerning the rations furnished to the healthy, or relatively healthy, inmates of hospitals, infirmaries, and prisons, as well as to the soldiers and sailors of different countries.

Second.—Endeavor to obtain, by means of similar information, and with the assistance of the hospital authorities in the different countries, comparative tables of the proportions of albuminoid substances, fats, and hydrocarbons contained in the regular diet lists, together with the indications for the employment of one or the other kinds of diet as used in the hospitals.

Third.—It would, however, be necessary to know first of all: (*a*) whether the individuals living upon a regulated form of diet are ever given any other food, whether this extra nutriment is given with regularity or not, and whether or not the amount of food so given can be determined with accuracy; (*b*) whether the distribution of these rations is so systematized that there is nothing in excess from which the hospital officers or attendants may derive an illegal profit; (*c*) whether the distribution is as just and equally proportioned as possible, and finally, whether the food for the attendants is prepared in other vessels than is that for the patients.

Fourth.—Obtain information as to the system employed to control: (*a*) the good quality of the ingredients, and (*b*) the preparation and distribution of the food.

Fifth.—Insist upon the necessity of according to the physicians unrestricted liberty in the regulation of the absolute and relative proportions of albuminoid substances, fats, and hydrocarbons which should be contained in the hospital diet. This liberty should be absolute, unfettered by any previous regulations, and free from interference on the part of the hospital authorities.

Sixth.—Encourage the publication in different countries of cook-books for the sick. These books should be in accord with the dietary customs of the countries in which they are published, and should indicate the proportions of albuminoid substances, fats, and hydrocarbons contained in the various dishes, in the same way as the doses of medicinal substances are indicated in the pharmacopœias.

Seventh.—Every physician should have suspended on the wall of his office a chart, after the model of König's, showing the quantitative composition of the ordinary aliments. In this way the importance of a rational dietetic régime would be constantly before his mind, and the chart would aid him in his dietetic prescriptions.

Eighth.—Those who make a study of popular hygiene, and who are able to do so, should occupy themselves with the preparation and rational composition of a dietary, which shall be sufficient and as cheap as possible to effect an amelioration of the lot of the poor.

Finally, the author said that he would be pleased to see the formation of an international association, composed of physicians of different countries, with the aim of applying the facts of alimentary physiology to the practice of medicine and to hygiene. The association would at the same time be subservient to the interests of science.

ON SOME DISORDERS OF NUTRITION RELATED WITH AFFECTIONS OF THE NERVOUS SYSTEM.

Being the Address in Medicine Delivered Before the British Medical Association at its Meeting in Belfast, Ireland, July 30, 1884.

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(Special for The Medical Record.)

Subjects of discourse are assuredly not lacking when an address in medicine is to be delivered. To me, thinking of many—for example, of subjects historical, of subjects ethical, of subjects polemical—has come the final selection of a subject which, appertaining as yet very little to any one of these categories, has for some years very largely occupied my thoughts. A few minutes after I received the honor of being invited by your President to deliver this address, I happened to meet a friend whose advice I value very much. He at once suggested that I should talk about some subject to which my thoughts had been much directed, and specified certain disorders of nutrition related with affections of the nervous system which had certainly interested me very deeply, and were capable of general discussion. I took the advice, and set to work to write the paper. Presently I found that one subject with which I proposed to deal, the subject of chronic arthritis, was to be handled in the Section of Medicine by my able friend and colleague in the last International Medical Congress, Dr. Dyce Duckworth, and that the influence of nervous system on normal and abnormal nutrition was to be introduced in the Section of Physiology and Pathology, by Dr. Alexander. On reflection, I decided not to alter my intention. The fact that the subject which I had chosen was also in the thoughts of others promised me a critical audience; and in the multiplying of observations, probably all regarding the question from different standpoints, there was offered, so far, greater probability of apprehending the truth.

Let me invite you, then, to follow me in considering some perversions of nutrition of the body, or its parts, brought about, or appearing to be brought about, by the morbid agency of the nervous system.

I will ask you to let me put a sort of label on the matters of discourse, and to speak of them as Neurotic Dystrophies. They will include conditions of overnutrition, and of undernutrition, where the variation is of quantity rather than of kind; conditions of misdirected or eccentric nutrition, where the variation is of kind as well as of quantity.

The little used, or scarcely recognized term, dystrophy, will for my purpose cover these various perversions, and the adjective neurotic will indicate the aspect from which I wish for the moment to regard them. They will not be exclusively dealt with. This is inconsistent with the limits of an address. I shall only discuss some three or four instances, and discussing those shall rather review than attempt to prove. The general direction of my thoughts in relation to this subject may be best illustrated by certain neurotic dystrophies of joints and muscles.

Muscular atrophy, produced by joint-lesions.—M. Charcot, in last year's *Progrès Médical*, has treated, with that marvellous lucidity which belongs to him, of certain effects upon the nutrition and contracture of muscles, determined to all appearance by affections of joints. That the nutrition of the muscles of limbs in which the joints are affected by chronic and painful disease is often subject to impairment, has, as M. Charcot in his paper indicates, been long ago observed. But M. Charcot's method of treatment of the correlation gives to it a new etiological aspect. Let me quote two of his cases.

A man, aged twenty-three, in the telegraph service, having been previously healthy in all respects, had, about a year previous to examination, struck his right knee in jumping over a fallen tree. It is important to notice that the injury at the time did not appear to be severe, and that he walked afterward several miles without difficulty. At length he stopped for a time, and then found himself unable to walk without a stick. For a week afterward he kept his bed; the joint was swollen, but not very painful, but there was a remarkable loss of motor power in the limb.

At the time of M. Charcot's lecture on the case, the patient presented a weakness of the extensors of the legs, almost amounting to paralysis, associated with some loss of power and wasting of the rest of the muscles of the limb. While the whole limb was smaller in volume than the opposite limb, it was obvious that the anterior aspect of the thigh was most affected; the muscles of that region were limp, and presented no projection even at the moment of exertion.

Two things were then evident; paresis of the muscles of the limb, generally most marked in the triceps; a wasting of the muscles of the limb generally, again most marked in the triceps. Tested by electricity, the muscles and their nerves gave so little reaction, both to galvanic and faradic currents, that, to use M. Charcot's expression, one would have thought that the muscles were absent. There was a simple quantitative modification of both reactions, giving rise to the conclusion that the condition was one of simple atrophy, and not of a degenerative atrophy, with which the well-known "reaction of degeneration" would have been associated. To these tests M. Charcot added a third, namely, the application of the electric spark. He placed the patient on an insulated table, and connected him with a frictional electricity machine. A spark being drawn from the front of the thigh, or from the region of the vastus internus, an energetic contraction of muscles followed. Percussion of the right triceps produced an evident contraction, and percussion of the patellar tendon determined marked shocks, not only on the side of the percussion, but also in the two upper limbs, particularly in the left. There was no ankle-clonus. The muscles of the front of the right leg and calf contracted less forcibly under electrical stimulation than the muscles of the opposite side. M. Charcot states that, at the time of his demonstration, much of the loss of power had already disappeared under the steady use of electrical stimulation. Discussing the bearings of the case with the most delicate refinement of analysis, M. Charcot grasps at once the fact that the wasting and loss of power exhibited by the muscles was out of all proportion to the severity of the injury and the amount of suffering. He dismisses theories of propagation of articular inflammation to the neighboring muscles. He dismisses the theory of atrophy from prolonged inertia, and finds himself reduced to admit the existence of what he calls a deuteropathic spinal affection, giving rise to the paralysis and the atrophy. In the absence of the "reaction of degeneration," he finds himself unable to recognize any indication of a serious change in the anterior horns of the gray matter of the spinal cord, and is reduced to the suggestion of a kind of stupor or inertia of the nerve-cells. He is also reduced to the explanation of the exalted tendon-reflexes by the hypothesis that, while the cells of the affected region are in a state of torpor, there is a condition of exaggerated reflex excitability in the rest of the spinal cord.

The second case is that of a hair-dresser aged fifty-one. Here a chronic rheumatoid arthritis had affected the wrists, the shoulders, the ankles, the knees, the hips, the elbows, the fingers to a slight degree, and the cervical articulations in succession. There was neither pronounced inflammation nor pain; but there followed a rapid wasting and a great loss of muscular power. The wasting of muscles was unequal, falling chiefly in the extensors of the limbs. These showed the same loss of sensibility to electrical stimulation which had been observed in the other case, with one exception: the right vastus externus presented the reaction of degeneration. Many of the atrophied muscles were the seat of fibrillar contractions. Some of them, the left deltoid in particular, were excitable by simple percussion. The loss of power was in excess of the wasting. The tendon-reflexes were again strongly accentuated. To the conditions here enumerated M. Charcot adds, from observation of other cases, "contracture," tonic contraction of certain muscles, chiefly of flexors.

Summing up these and other cases, M. Charcot argues that the paresis, wastings of certain muscles, contractures of certain muscles, and the other associated symptoms, indicate an influence propagated from the affected joint or joints, incident on the spinal cord, and thence reflected to the muscles, giving rise in the one set of cases to contracture, where exaltation of function must be supposed in another set of cases to atrophy, where depression of function must be supposed.

If we accept M. Charcot's conclusions, we have in this group of cases a dystrophy of muscles, brought about by irritation commencing in joints more or less related with those muscles, propagated through centripetal nerves to the spinal cord, and reflected thence by centrifugal nerves to the muscles.

M. P. Berger has related for us some cases presenting the converse of the observations of M. Charcot just related. In M. Berger's cases, fracture of the upper part of the femur near the hip-joint was followed by arthritis of the knee; not attributable in any way to extension of inflammation through the intermediate tissues. M. Berger's observations would lead to the establishment of the possibility of a reflex influence reversing the path of the influence just quoted. In other words, we have before us observations suggesting that joints being inflamed may, by a reflex influence, give rise to dystrophies of associated muscles; and that bones and surrounding textures being injured may give rise to dystrophies of neighboring joints. Such considerations carry us on to search for the middle term; to examine if there be any evidence indicating a direct morbid influence of the spinal cord on the nutrition of the component parts of limbs in common; and secondly, they may lead us to inquire whether the nutrition of joints and other parts of limbs may be affected by influences propagated from viscera; that is to say from parts which are not components of limbs.

Chronic rheumatic or rheumatoid arthritis as work of nerve-influence.—Having this in view, I will ask you to accompany me in considering chronic rheumatic arthritis as a possible work of nerve-influence. I use this term, chronic rheumatic arthritis, because I am speaking in Ireland in the presence of many men who must be well acquainted with the work of Adams, of Dublin.

Chronic rheumatic arthritis is, as you will also know, but one of many names given to an affection of joints, spoken of by the non-medical public as rheumatic gout. The morbid lesions of this disease are of a kind justifying completely the application to them of the term dystrophy; for while they include destructive inflammation of articular cartilages, and subsequently of the bone beneath, they include also hypertrophic changes in the synovial membrane, and in the periosteum around the articular surfaces.

Here, once more, I must refer to the work of M. Charcot, whose name is associated with the remarkable observation that a form of chronic joint disease, presenting both the atrophic and the hypertrophic lesions of chronic rheumatic arthritis, forms a part of the phenomena of tabes dorsalis. It is true that the atrophy predominates enormously; but the hypertrophy can always be recognized by any one who may care to study with care the specimens of joint-trouble exhibited by M. Charcot. The essential lesion of tabes dorsalis, as at present recognized, lies in the spinal cord, and is, so far, a central nervous lesion. But the actual seat, you will remember, is not in the gray matter, but in columns of fibres, which, to all appearance, are the channels of centripetal influence, flowing, at least in part, from the voluntary muscles. In fact, it is quite possible to argue that the joint-lesion may be here the result of reflection of irritation, propagated to the gray matter of the spinal cord by the diseased muscle-representing fibres of the posterior root-zone; that, in other words, muscles, subjectively presented to the gray matter as in a state of irritation, can induce by reflection a dystrophy of joints. If there be any possible acceptance of the idea that joints, being irritated, can, by reflex trophic influence, affect the nutrition of muscles; and that muscles, or their centripetal nerves, being irritated, can produce, also by reflex trophic influences, dystrophies of joints, we can hardly stop short of accepting a further suggestion to the effect that some part of the central nervous system, presumably some part in the spinal cord, presides, in a common sense, over the nutrition of organs so closely associated as joints and muscles, perhaps also over that of bones.

Turning our attention to what is known of the direct influence of the central nervous system upon the nutrition of muscles, we know already that there is a very fair certainty of the existence of a definite relation between certain affections of the anterior horns of the gray matter of the spinal cord and atrophic affections of muscles.

Associated with an acute inflammation of groups of cells in the anterior horns, are found the phenomena of infantile and essential paralysis; associated with an inflammation of the same anterior horns, differing from that just mentioned in being chronic, and differing probably in its method, are found the phenomena of progressive muscular atrophy. Infantile paralysis and progressive muscular atrophy have each so distinct a grouping of symptoms as to confer on each a marked clinical identity, and on each an assured independence of the other. Nevertheless, they have in common one important factor, wasting of muscles; but the wasting of muscles is, if we may judge by their electrical reactions, not brought about by the same process in the two cases. In infantile paralysis, the reaction of degeneration leads us to infer that the nutrition of muscular (centrifugal) nerves is seriously involved. In progressive muscular atrophy, this reaction does not appear, there being only a diminution of electrical reaction proportionate to the loss of muscular fibre.

Joint lesion in progressive muscular atrophy.—My friend, Dr. Gulliver, of St. Thomas's Hospital, an inheritor of the observing faculty and accuracy of his celebrated father, has recently communicated to me, quite independently of this address, the notes of a case in which a joint-lesion appeared as a part of the phenomena of progressive muscular atrophy.

In studying this disease, I had long thought that there were indications, in many cases, of affections of joints as well as of muscles. Dr. Gulliver and I have often conversed on the subject, and when the patient, whose case I will now relate, came under his notice, he lost no time in bringing her to mine.

K. M——, a married woman, aged fifty, came under treatment in June, 1884. Of the family history nothing was ascertained. Her previous history presented nothing important, save that she had never had rheumatism. For six or seven months she had noticed a loss of power in the left arm, but had been able to carry on her occupation of laundress till within the last six weeks. About five months ago she began to experience difficulty in speaking, which increased till, at the time of observation, she was unable to articulate in any intelligible way. She had also a growing difficulty in swallowing, with impairment of the use of the lips in movements other than those of articulation, for instance, in blowing out a candle, and she had dribbling of saliva. Three months ago—at least, three months after the commencement of muscular feebleness—she began to experience pain in the left shoulder-joint, greatly increased by raising the arm, actively or passively. At the time of observation, the left arm was found to be much wasted, particularly in the forearm, and in the thenar and hypothenar eminences. The hand had the claw-shape characteristic of progressive muscular atrophy; it was the *main en griffe* of Duchenne; and she could not oppose the tips of the fingers to the tip of the thumb. She could not raise the left arm to the horizontal position, and all attempts to do so gave rise to much pain in the shoulder-joint. All movement involving the shoulder-joint, whether performed voluntarily or effected by other persons, gave much pain. The joint showed no coarse changes; there was no affection of the right arm or of the legs; the muscles of both arms answered equally to the galvanic current; those of the left appeared to react a little readily under the faradic; the knee-jerk was more active than usual in both legs. The tendon-reflexes of the arms were investigated, but the results were not definite. She could not speak, being able to produce nothing more than a monotonous inarticulate sound; she could not protrude the tongue, or blow out the lips. The palate was motionless; and she swallowed with difficulty.

Although the order of affection of the muscles of the arm is not recorded, the case is clearly one of progressive muscular atrophy, in which the bulbar affection is predominant. And while, as regards the limbs, the left upper extremity was alone affected, the painful state of the left humeral articulation indicates the existence of a definite change in the nutrition of a joint belonging to the same area of innervation as that of the affected muscles; and, so far as it goes, the case tends to show that one central nervous affection may give rise to concomitant dystrophy of joint and muscle.

(To be continued.)

Treatment of Ununited Fracture of the Tibia.—Dr. Eugene Hahn writes, in the *Centralblatt für Chirurgie* of May 24, 1884, describing a new procedure employed by him with success in the treatment of pseudarthrosis of the tibia. The case was one of compound comminuted fracture, in which there had been a loss of a considerable amount of bone-substance, the two ends of the tibia being separated about three inches. Various attempts had been made to secure union without success, until it occurred to Dr. Hahn to implant the broken end of the fibula, which bone had been fractured higher up than the tibia into the medullary canal of the upper fragment of the tibia. He did so, and union took place between the two bones with the result of restoring the usefulness of the limb. The patient wore a light retention splint on the leg, and was able to walk about with ease.

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THE RESCUE OF LIEUTENANT GREELY, THE EFFECTS OF THE ARCTIC CLIMATE, AND THE QUESTION OF CANNIBALISM.

THE Arctic regions have, by the enterprise and heroism of Commander Schley, been compelled to surrender the living remnants of Greely's party, and some of the dead bodies of victims of this unfortunate expedition. The facts of the fitting out of this expedition in the interest of science, the lamentable failure of our Navy Department last year, and the year before, to place supplies where they were the most needed, and the terrible chapter of suffering and privation which succeeded the retreat of the party in August, 1883, from Lady Franklin Bay to Cape Sabine, and their long incarceration in the latter locality—a chapter of desolation and misery of which the half has not yet been told—are sufficiently familiar to the readers of THE RECORD.

If it should be proved that the necessity of cannibalism was added to the horrors of the last year's experiences of this party, the story of hardship and wretchedness would seem to be about as black as reality could make it, or even imagination could paint it.

A private interview with Lieutenant Greely, at his former home, has enabled us to obtain a somewhat clearer insight into the physiological and pathological effects of prolonged residence in the Polar regions, as well as the straits to which the Greely party were finally reduced. He ascertained that such sojourn, by inhabitants of warmer climates who are in good physical trim, is for a brief term of years compatible with a high state of all the organic functions, in which there is entire freedom from diseased manifestations of every kind; but there is a decided limit to the endurance by Europeans and Americans of such extreme prolonged cold. The system is at first, and for a long time, by an admirable series of internal adjustments, braced up against the rigors of climate; but after the first year a considerable deterioration in muscular and nervous energy, and in the calorigenous processes of the economy is experienced. The severity of the second winter was found by the party somewhat harder to bear, but the experience of the previous winter had taught them how best to fortify and protect themselves, and husband their forces. The third long Arctic night, in which the thermometer was never less than three below zero, and much of the time was down to forty or fifty below, would, under the most favorable circumstances, have been a painful season to the party; vital reaction was quite perceptibly lessened; muscular tone was impaired, rendering exertion difficult, and rheumatisms began to prevail. Could the party, however, have had plenty of food, and full and good shelter, they would undoubtedly have all been living at this day. Lieutenant Greely, in reply to an interrogatory, affirmed his doubts as to whether his men, if well provisioned, could have continued to live at Fort Conger more than five years. The constitution of the average American is not capable of prolonged continuous adjustment to more than zero cold, and such acclimatization could only come about after a series of generations where the law of survival of the fittest should operate, and in correspondence with a radical change in organization, in which nutritive and muscular development should predominate over cerebral development; in other words, nature has shown us in the mentally dwarfed but physically hardy Esquimaux, the type of organization best fitted for living in those sep tentrional latitudes. It, however, is no less a matter of fact that the inhabitants of meridional climes admirably adapt themselves temporarily to the most extreme cold. In the retreat from Moscow, in 1812, the Italian regiments stood the cold better than the Germans, and notably better than the Russians, who were accustomed to the climate.[1] The Turks presented the same relative immunity at the siege of Sebastopol. Longet, from whom these facts are taken, remarks that the aptitude to resist inclement temperature is acquired and lost in turn; that people nurtured in temperate or cold climates, who go to the torrid zone to live, are much less sensitive to the cold for a time after their return to their native country, though this lessened susceptibility disappears after a year or two.

As man can live amid intense surrounding cold only by keeping his internal temperature at about 98½° F., all the calorigenous centres—which comprise every living element or cell in every part of the body—are stimulated to greatly augmented activity; the respiratory, digestive, and assimilative processes are performed with unwonted energy; the heart's action and the circulation are notably quickened. Lieutenant Greely remarked that breathing air of such intense coldness had something of the effect produced by breathing pure oxygen; as for pulmonary troubles he heard no complaint of them while the party was at Fort Conger, in Lady Franklin Bay, at a latitude of about 82°, where the first two years were spent; even simple catarrhs were unknown, the only thing from which the men suffered being occasional rheumatisms, and stiffness of the muscles and joints.

The party had ferocious appetites during all of this long sojourn in the North, each man eating with relish three meals of animal food and two lunches every day, and craving fats, though not to the extent which some Arctic travellers report. Not even when the thermometer marked 60° below zero did these men indulge in crude blubber or tallow candles, which tradition has designated as the customary food of Arctic voyagers; nor was even pemmican regarded as a rare and dainty dish by them. Canned meats, of which they had an abundance during the first two years, and a steak or ragout from the walrus, seal, or polar bear, were prized as the

[1] Longet: Traité de Phys., t. ii., page 540.

essential conditions of well-being. As for spirituous liquors, they were used with great moderation and doled out to the members of the expedition as occasion seemed to demand, and only when some unusual exertion or exposure brought extraordinary fatigue or prostration; as means to fortify the system against cold or brace it up for forced marches, whiskey, rum, and other alcoholic stimulants were regarded as of little benefit.

The party slept well during all their long stay at the North, except during the last few months of physiological misery, when the pangs of hunger and the weakened, disordered condition of their anæmic brains precluded refreshing sleep; in the case of some of them the horrors of scurvy made their state more deplorable still.

As for the prolonged agony at Cape Sabine, sympathizing, pitying humanity would fain draw a veil over those appalling scenes which can be imagined, but cannot be described. If men driven to madness by long fasting, the only means of sustenance available being strips of seal-skin, shrimps, and Arctic moss, their scanty rations being exhausted; entertaining the forlorn hope that if they might hold out only a few weeks longer deliverance would come to them; if under such circumstances there were no alternative but death or anthropophagy, it may seem to us that death would be preferable to life sustained on such terms, but we can realize neither the hunger, nor the desperation, nor even the impelling strength of the most imperious instinct of our nature.

In justice to Lieutenant Greely, it must here be stated that he denies all knowledge of cannibalism as having been practised by any members of his party. If some of the men, to save their lives, fed on the carcasses of their companions, it is a matter for which they are individually responsible, not he.

The results of the autopsy of Lieutenant Kislingbury are quite significant. We make no comment on the sworn statement of the physicians, except to call attention to the fact that the body was stripped of muscle where the muscle was the thickest; the pectoral, gluteal, dorsal regions, the thighs, legs, and arms in their entirety, were denuded of flesh, and there was evidence that this was done with a knife; not that the soft parts were gnawed away by some wild animal; moreover, the viscera were intact. Virtually the same thing was done with the body of Private Whistler, as also proved by post-mortem examination.

There is, we hardly need say, other evidence, obtained from members of the rescuing crew, that goes to establish the fact of cannibalism at Cape Sabine. It is proper to say, however, that the results of the examination of the contents of the Kislingbury stomach cannot, by themselves prove absolutely that human flesh was eaten. In this connection we would refer to the letter of Dr. Heineman (see page 216), in which some very suggestive questions are asked.

In considering this revolting subject, it is the scientific or physiological side that claims our attention. Can the practice of cannibalism by civilized men—men of naturally human and refined natures—be conceived as *possible* under any circumstances? What are the psychological antecedents and accompaniments of anthropophagy? Is cannibalism ever justifiable, and was it justifiable in the Greely party, in the straits to which they were reduced? In other words, what is the *moral* aspect of the question?

1. Can the practice of cannibalism, by civilized men, be conceived as possible? It is true that no one of the readers of this journal can easily imagine the affirmative of this question in its application to himself; looking at it, as he must, from the high normal plane to which, through ancestral inheritance and moral culture, countless evolutionary ages have raised him. And doubtless, the average civilized man could not be brought to an act of cannibalism by any process of *acute* starvation. Lord Ross has remarked that even the savage Esquimaux will starve rather than eat human flesh.

But here we must emphasize the work *acute*, as opposed to *chronic* starvation. Not one week or two can easily undo the work of ages, as manifested in the development of brain, and the noblest powers of mind. Amid the general languishment of the organs and tissues, the brain and nervous system the longest maintains its integrity.[1] There is prostration, there is hebetude of the nervous functions, but delirium comes late, if at all, and when it makes its appearance, the unhappy sufferer is too feeble to make any energetic effort to save himself.

But it is not so in *chronic* starvation, that may be many weeks, if not months, in effecting the deterioration and destruction of the organism. In all ages, and among all nations, there have been histories of famine in connection with sieges, droughts, etc., where prolonged inanition has driven men to cannibalism. Such facts show that anthropophagy *has* been possible under circumstances of deepest misery; and this brings us to the second question: What are the psychological accompaniments of cannibalism? Under this head we must be brief. There is no doubt that the functional integrity of the brain and mind is dependent on sufficiency of good food and a healthy nutrition. He that enjoys *most* the cerebral acquisitions which he has inherited and cultivated, is the man who, *cæteris paribus*, is the best nourished. Conversely, long continued mal-nutrition effects what Hughlings-Jackson calls gradual dissolution in the "topmost layers" of the highest centres; the individual is now "lost to his surroundings," is "defectively conscious." In other words, the victim of chronic inanition becomes a degraded being, and is capable of lapsing into a stage where brute instincts and brute appetites predominate.

In the famine which attends on long sieges, mothers have been known to devour their own offspring, whose lives they had taken. "Verily," as Longet observes, "where the maternal instinct perishes, every other noblest instinct must have departed."

The psychological antecedent and accompaniment of cannibalism, then, is a state of positive frenzy or insanity, from which every element of moral responsibility is lacking. The words "delirium of famine" appropriately designate this condition, and are so used by some authors.

To apply this thought to the particular case under consideration, who will say that the life at Cape Sabine did not present all the conditions requisite for engendering

[1] According to Chossat's experiments, the nervous system scarcely loses 1.9 per cent. of its substance. Recherches Expérimentales sur l'Inanition. Paris, 1843.

in some, if not in all the members of the party, the necessary psychical and physiological antecedents of cannibalism? It seems more probable, however, that the eating of human flesh was comparatively a late occurrence in the dreadful experience at Cape Sabine; this means of sustaining life not being resorted to till their regular rations were almost if not quite consumed. It will be remembered that Kislingbury died virtually of starvation, and that in his stomach there was not a vestige of animal or human flesh.

3. Is cannibalism ever justifiable? Was it justifiable at Cape Sabine? Every right-minded person will, we think, say "Yes!" If the question of *irresponsibility* is settled in the affirmative, then all discussion of the moral aspect of cannibalism is foreclosed—there can be no immorality in the case. If any or all of this band of devoted heroes, who so barely escaped being *martyrs* to science, were saved by eating the dead bodies of their comrades, with a deliberate suppression of an irrational sentimentality, and not without due reverence for the dead, we say that we regard the act under the circumstances as justifiable. We believe that no pretence has ever been made that these men murdered any of their companions for such a purpose.

That we have not misrepresented the terrible state of mental dilapidation of the party at the time they were found is apparent from all the testimony. Lieutenant Powell says that "they were all in such a dazed condition that they did not realize that they were rescued until they had been given some ptarmigan, and then they began to curse the rescuers for not giving them more food."

THE PROPHYLAXIS OF MALARIA.

The address on malaria, delivered by Professor Tommasi Crudeli, at one of the general meetings of the International Medical Congress, and which we are enabled, by special arrangements made in Copenhagen, and by our cable facilities, to present in full to the readers of The Record this week, is one of unusual interest. It deals with questions of vital importance to humanity and which especially concern very nearly the inhabitants of our own land. There is scarcely a township in the United States where malaria does not count its victims, and in many portions of the country it is as dreaded a scourge as it is in Italy or on the west coast of Africa. Even in the immediate neighborhood of New York pernicious remittents are not unknown, and deaths from this cause figure in nearly every table of vital statistics. It is on account of the interest of the subject, as well as because of the deservedly high reputation of the author, that this one of the general addresses of the Congress was selected for presentation in full to our readers.

The author is strongly opposed to the paludal theory of malaria, to which, indeed, but few authorities of any weight at the present day incline. We, at least, in this country need no array of arguments to disprove the notion that the malarial ferment is formed exclusively in marshy ground and is thence carried by the wind to other dryer and more elevated regions. An ample and a sad experience has taught us that it is usually indigenous to the soil on which we live, and that no exceptional degree of moisture is necessary to its production.

It will, perhaps, be a matter of surprise to some who remember the confident predictions made a few years ago of the extinction of malaria by the cultivation of the eucalyptus-tree, and who have not noticed the growing silence of those who were formerly most enthusiastic in their advocacy of this measure, to read the disparaging comments of the author upon the results obtained. The setting out of eucalyptus plantations is attended with a great expense, which, he claims, is by no means commensurate with the benefits realized, for oftentimes the good effects are purely imaginary. The measures which afford the greatest hope of success in the task of purifying a malarious soil consist, in the author's opinion, in thorough and systematic drainage and forced cultivation of the ground. Sowing the land thickly with grass offers a barrier to the escape of the malarial poison, but is in the nature of the case an imperfect method of securing immunity from infection; for of course a breach is made in the ramparts every time that a spade is plunged into the sod, and the enemy is never slow in forcing its way through the broken barriers.

The results of Professor Crudeli's experiments in the matter of individual prophylaxis are those which offer the most encouragement. This is, indeed, the first difficulty to be surmounted; for, as he rightly says, it requires time and the presence of man in order to repress the formation of the malarial ferment, and unless we can insure man from the attacks of the disease during this preparatory period, the reclamation of the lands can never be accomplished, at least by civilized nations. The excessive use, or abuse of quinine, like the abuse of mercury, is nearly as baleful in its effects as the disease which it is designed to overcome, hence the desideratum that exists for some prophylactic remedy that is at once a real prophylactic and at the same time readily obtainable and suited for popular use. Arsenic, which the experiments detailed in the address would seem to show does possess prophylactic virtues, is a drug that could hardly be put with safety into the hands of the laity, despite the alleged existence of the Styrian toxiphagi. Whether the decoction of lemon will prove on more extended trial to possess the powers that are claimed for it, time and experience can alone determine. The author shows that he is endowed with the true scientific spirit in being ready to examine into the merits of a popular remedy of so simple a nature. And we certainly have reason to hope that such conscientious investigation and painstaking research will meet with their reward. The sons of Italy were once foremost in the ranks of science, and Crudeli and his fellow-laborers are doing much to restore to their country her proud eminence among the nations of the earth.

OUR CABLED REPORT OF THE INTERNATIONAL MEDICAL CONGRESS.

We are happy to announce the completion of our cable report of the International Medical Congress held in Copenhagen. The most notable address is one which we have the pleasure of presenting in full—that by Prof. Crudeli, of Rome. Prof. Panum's address is given in full abstract, while the remaining proceedings are incorporated in the general cable report, including the abstracts of addresses by Sir William Gull and Virchow.

We may be perhaps excused for congratulating ourselves on such a successful accomplishment of a plan for presenting to our readers on this side of the Atlantic a full and authentic report of one of the most notable Congresses held for a long period. We have been enabled to demonstrate what can be done by cable by giving an accurate report of the doings of a scientific body in which subjects of a purely technical character are discussed.

We believe we have succeeded in presenting to our readers a *résumé* which is sufficiently comprehensive and instructive to warrant us in making the effort. The abstracts of addresses and papers have been carefully prepared by our correspondent with this end in view, and we are convinced they can speak for themselves.

As will be seen, the meeting was a success from every point of view—the subjects and addresses were well selected, and the different orators did them full justice, thus giving a high scientific tone to the meeting. Nor were the sections behindhand as to subjects of interest or of speakers to present them. This is evident through some of the reports which we give of sectional work.

It would be impossible, of course, to present in the time allotted, even with the best of cable facility, an exhaustive report of the proceedings, but sufficient has been done to give our readers a fair idea of what was accomplished by the Congress as a whole. Further reports by mail will give fuller detail. The social element of the meeting was what it should be, and though generous to the full point of royal hospitality it did not interfere in any manner with the strictly scientific work. The selection of the next place of meeting, at Washington, D. C., was good, and as was predicted the invitation on behalf of the profession of this country was received with a becoming cordiality. It remains now for the profession of this country, by every means in its power, to make the next session of the Congress a success, and demonstrate in due form its appreciation of the honor conferred by the selection.

CRUELTY TO THE PAUPER INSANE.

Of late years the worst accounts regarding the treatment of the insane, in the East and North at least, have related to the pauper insane in the smaller almshouses and prisons. The last story of cruelty toward this class comes from Pennsylvania. Dr. Thomas G. Morton, for the State Committee on Lunacy, has sent the following letter to every physician in the State:

PHILADELPHIA, August 16, 1884.

My Dear Doctor: Two instances of cruel treatment of insane patients in charge of private parties have recently come to the knowledge of the Committee on Lunacy. In one case an old man was found naked in an outhouse in a very secluded spot of the State, where he had been confined for more than thirty years chained by the leg. In the other case neither the public nor the Committee had any knowledge of the inhumanity practised upon an old man, who had likewise been chained for more than a quarter of a century, and it was not until his death that the particulars were brought out and made public.

In view of these facts, the object of the committee is to find out if any such cases are known or believed to exist, and if so, to send them to the State hospitals for the insane, where they can receive humane and proper treatment, and that if you have any reason to believe any such insane are concealed and badly treated, we will, on private information from you, investigate such cases and take the necessary steps for their transfer. Any communication will be, if desired, considered confidential.

Yours, very truly,

THOMAS G. MORTON, M.D.

Since the publication of the above, another case of a similar character has been published. It was that of a young man who had been confined for some time in the Berks County Almshouse. He had a ball of heavy weight chained to his leg.

The facts revealed by the Pennsylvania Committee teach again the lesson that the pauper insane ought not to be kept anywhere except in institutions provided especially for them, and under responsible medical management. Poverty may indeed compel counties to care for some of their own insane poor in workhouses. But where this is necessary there is no excuse for not having careful and frequent supervisions.

Although medical philosophers and reformers may reason, demonstrate, and protest they very well know that there is a bad political method at the bottom of most of the abuses they condemn. The people must be educated and then aroused before thorough reform can take place.

THE CRIME OF A MIDWIFE.

The *Louisville Medical News* states that a physician in that city recently returned a death certificate in which the cause of death was given as placenta previa, adding that the death was "superinduced by the criminal carelessness of a midwife." It appears that the deceased had engaged the services of a midwife. She had suffered from hemorrhage for several weeks before labor came on, but the midwife paid no attention to it. When the labor pains began, the hemorrhage was very profuse. Still the midwife did nothing, except leave her patient, saying that she would return soon. She never came back at all; and the patient died.

The *News* makes the above the text for a very vigorous attack upon the midwife in general, and the German midwife in particular. As for remedies the editor betrays a cynical desire to see all midwives poisoned or put out of the way by some means.

The suggestion is made, however, and it is one we cordially endorse, that all midwives be licensed, and, before being licensed, be obliged to give evidence of some education and skill. At present the chief education which the midwife receives is the highly subjective one of having had from five to ten babies herself.

An Enthusiastic Electro-therapeutist.—According to the *Medicinal Central-Zeitung*, the well-known (?) therapeutist, Dr. Seimus, has gone to Marseilles for the purpose of setting up electric machines in the wards of the hospitals there. By the disengagement of ozone he hopes to disinfect the air, and perhaps assist in curing the patients.

News of the Week.

Professor L. Hermann, of Zurich, has been called to the chair of Physiology at Berlin to succeed V. Wittich.

The Celebrated Physiologist, Professor Carl Vierordt, of Tübingen, has resigned, and his place is to be filled by Professor Grützner, of Bern.

More Cholera Commissions.—The Roumanian Government has sent Dr. Maccovich as a "commission" to Marseilles, in order to study the cholera.

A Plague Commission.—The Russian Government has sent Dr. Batorsky to Bagdad, for the purpose of investigating the plague, now prevalent there.

A London (Canada) Medical Society.—The medical men of London, Canada, have recently met and organized an association for social and scientific purposes.

Women as Internes in the Paris Hospitals.—It is stated in the *Revue Médicale*, that women are soon to be admitted to the examinations for positions as internes in the Paris hospitals.

The Characteristic Enterprise of The Medical Record finds another illustration in its cable report, in its issue of 2d inst., of the proceedings of the British Medical Association at its meeting in Belfast, Ireland, on July 29th and 30th.—*Medical Age.*

Journalistic Changes.—The *Canadian Practitioner* has a new editorial staff. Drs. Cameron and Nevitt have resigned, and Drs. J. E. Graham and W. H. B. Aikins have taken their places. Dr. Wright continues upon the staff. The *Pacific Medical and Surgical Journal* and the *Western Lancet* have consolidated.

Virchow *vs.* Pettenkofer.—Professors Virchow and Pettenkofer are busily arguing with each other upon the subject of cholera. The gist of their differences lies in this: Virchow is a contagionist, Pettenkofer is a localist. That is to say, the latter believes that no specific germ can produce cholera unless there is a specific local condition to favor it.

Nepotism at the Massachusetts General Hospital.—Some interesting correspondence has been going on in the *Boston Medical and Surgical Journal* relative to the above subject. It is charged that the medical board appoint as *internes*, members of their own or their friends' families, and that appointments are matters of personal favoritism rather than of real merit. There seems to be some truth in the charge, but it is not denied that the *internes* are good men.

The First Case of Yellow Fever which has appeared in this country during the present season was reported on August 15th, and occurred at Key West, Fla. The patient was an officer on board the U. S. vessel Galena. The Galena was ordered at once to Portsmouth, N. H., while the patient was taken in charge at Key West. It is now six days since the case was reported, and there is as yet no further appearance of the disease.

The Medical Details of Cannibalism.—The account of the examination of the body of Lieutenant Kislingbury, as given by two physicians of this State, and telegraphed all over the country, were shocking in the extreme. We cannot see the necessity of medical men lending their special knowledge for the elaboration of horrible details regarding the supposed Arctic cannibalism. Is science or the world any better for knowing that the pectorales muscles were eaten and the recti abdominales were not?

The Head of Campi.—The experiments of Dr. Laborde, which we have already referred to, upon the head of the assassin Campi, were rather tame after all. It was an hour and a half after the execution before fresh blood was injected into the carotid arteries. The face naturally became suffused, some electrical reactions were obtained, but no reactions of the special senses, and no reflexes. The assassin had agreed before death to make some signal if the transfusion brought back any consciousness. Campi's brain was turned over to the Anthropological Society.

Adulterated Beer.—Imported, and especially Bavarian beer, has been supposed to be exceptionally pure. This is not the case, however, according to recent reports. These say that so many complaints have been made of adulterated beer that the Bavarian Government has taken the matter in hand and ordered an investigation to be made. All breweries are to be subject to inspection. At Memmingen the inspection has resulted in the condemnation of thirty-three brewers to pay fines ranging from $50 to $250, according to the degree of impurity of their beer. Three others were sentenced to eight months in prison.

The Canadian Medical Association—The British Association for the Advancement of Science.—The Canadian Medical Association meets next week, August 25th, 26th, and 27th. The meeting of the British Association for the Advancement of Science will commence on Wednesday afternoon, August 27th, after the close of the Canada meeting. Over fifty of the physicians and surgeons who have promised to come out for the British meeting, have been invited to attend the Canada meeting, and more than half have accepted, among them being Mr. Lawson Tait, who has promised to deliver an address on "Abdominal Surgery."

A Cure for Red Noses.—The sun which shines for all is sometimes a factor in producing red noses. It is very appropriate, therefore, that the New York *Sun*, which also shines for all, should devote its columns to discussing remedies for the congested organ. The following are three "cures" suggested by as many correspondents:

"A remedy which I have used with best results is the following: Take of vaseline one ounce, precipitated sulphur, two drachms. Mix well and apply to the affected part night and morning, rubbing in well. Continue the application for one or two weeks and the redness will disappear. Physician."

"For the benefit of 'A Reader,' Marshall County, W. Va., I would suggest that a good strong brine might effectually and permanently cure the red nose of which he complains. W. H. H."

"Another Plan. A remedy for red noses. Keep on drinking and it will turn purple. Slap Sticks."

THE CHOLERA.—The cholera continues to decrease in extent and violence at Toulon and Marseilles. It has, however, now spread to over forty places in France, and to a large number of places in Italy. While the disease has become milder in the two cities mentioned, it shows a malignant type in many of the small towns which it has reached.

THE FIRST DISCOVERER OF THE CHOLERA GERM.—Naturally, the questions of priority as to the discovery of the alleged cholera bacillus now appear. A correspondent of *The Lancet* puts in a claim for the late Professor Pacini, of Florence, the discoverer of certain corpuscles in the skin bearing his name. In 1854 he wrote to the *Italian Medical Gazette* as follows: "Examining minutely the different parts of the gastro-enteric tube of subjects dead from cholera when in the algid state, I was forced to the conviction that that epithelial lesion is covered by nothing but a very simple organism of extreme tenuity, which I shall call 'microbe,' a term generic and modern, and with special reference to the disease in question, 'cholerigenous microbe.'" This discovery was more quickly and thoroughly appreciated by foreigners than by its author's own countrymen, and in 1865, on the next cholera visitation, Pacini wrote: "When my scientific labors, having made the tour of Europe, will have returned, arrayed in foreign garb, to Florence, they will have permission to enter the schools, and then we shall be enjoying the tranquil repose of Trespiano—in our grave, in short." This bitter forecast, says *The Lancet*, has been verified almost to the letter, Pacini's doctrine, rehabilitated by the German Cholera Commission, being now adopted by his compatriots and taught in the Istituti Pathologici of Italy a year after his death.

We must dissent from the opinion that Pacini discovered the cholera bacillus. He very likely saw some minute organisms in the intestine, as many others have done, but the cholera bacillus, according to Koch's description, is revealed by a one-twelfth oil immersion with an Abbe condenser, the tissue being dried and stained with fuchsin. It is quite safe to say that Koch is the Columbus of the Comma-Bacillus, whatever its significance may turn out to be.

SUGGESTIONS RELATIVE TO EPIDEMIC CHOLERA.—The Massachusetts State Board of Health has issued a circular under the above title. It contains an excellent account of the measures to be taken by individuals and municipalities in order to prevent cholera. The following disinfectants are recommended: For clothing, towels, bedding, and other textile fabrics, a solution of bichloride of mercury, 1 part to 1,000; carbolic acid, 1 part to 30 of water. Subjecting to a temperature of at least 212° F. (100° C.) for an hour, either by boiling or baking, is recommended as quite efficient when practicable. It would be better still to burn all soiled clothing. For water-closets, urinals, sinks, and cesspools: solution of bichloride of mercury (corrosive sublimate), 1 part to 1,000 of water; solution of carbolic acid, 1 part to 30 or 40 of water; solution of chloride of zinc, 1 part of liquor zinci chloridi, U. S. P., to 200 of water. For the disinfection of excreta the choleraic discharges should receive special attention. It is therefore recommended that such discharges be received in metallic or earthen vessels and treated with the solution of bichloride of mercury, 1 to 1,000, or by the chloride of zinc solution. Undoubtedly the better mode of treating the discharges is by complete destruction by fire. For this purpose, when practicable, the erection of small furnaces, stoves, or crematories is desirable wherever cholera hospitals are established. In consequence of the fluidity of the excreta it would be preferable to receive them into sawdust, or other light combustible material previous to burning. Bodies of persons deceased from cholera should be wrapped in cloths saturated in a solution of bichloride of mercury previous to burial. For the disinfection of houses sulphur is recommended, as advised in previous circulars of the board. Effective disinfection by burning sulphur requires eighteen ounces to each space of one thousand cubic feet. The sulphur should be broken in small pieces, burned over a vessel of water or sand, so as to avoid danger from fire, and, if the room is large, it should be put in separate vessels in different places. The room should be tightly closed for six hours, and then aired; it is better that the room should be warm than cold. Of course, efficiently disinfected air is, during the process of disinfection, irrespirable. Most articles may be disinfected in this way, if hung up loosely in the fumigated chamber, although it would be an additional safeguard to expose anything thick, like a bed-mattress, to prolonged heat at a temperature of 240° F.; and, indeed, *heat* must, with our present knowledge, be considered *the best disinfectant*. With this end in view, local boards of health are advised to procure furnaces and laundries, as is commonly done in other countries, to be used for the sole purpose of disinfecting articles which have been exposed in the infectious diseases, as recommended in the "Ninth Annual Report of the State Board of Health" (pp. 255 et seq.). Of course, a much simpler disinfecting furnace than that described will answer every purpose. For ordinary use, in disinfecting houses, the sulphur process is the best.

PRINCE BISMARCK'S PHYSICIAN, DR. SCHWEININGER, who was some time ago made a professor, has now, it is said, been given an order of nobility and made Professor in the Faculty of the Berlin University, with authority to deliver certain courses at Charité. *Apropos* of Dr. Schweininger, the German papers publish in the humorous column the following story: "A servant in Münich was showing the sights to a country visitor. The latter wanted to know all about the figures and statues on the University Building. Rather than confess ignorance his city friend gave the names of distinguished contemporaries to the various gods, goddesses, and other immortals in stone. 'And that figure,' he said finally, pointing to a very classically dressed statue on the façade of the left wing, 'is Dr. Schweininger.' 'Aha!' said the admiring visitor, 'but where then is his coat?' 'Oh,' replied his friend, 'since he cured Prince Bismarck, the people have sent for him from all over the country, and he has had to travel so hard that he has worn off his clothes!'"

CRITICISING THE LOUISIANA STATE BOARD OF HEALTH.—*The Mississippi Valley Medical Monthly* thus criticizes the Louisiana State Board of Health, which started off this year with such alluring promises: "This Board," it

says, "has neither the ability (financial) nor the authority to enforce such quarantine regulations as this great Valley has a right to demand. Nevertheless, in the face of these facts and in opposition to the expressed will of the National Board of Health, the Marine Hospital Service, and the Sanitary Council of the Mississippi Valley, together with muttering threats of shot-gun quarantine, this Board has persistently arrogated to itself the right to enforce its rules and compel the commerce of the United States to yield tribute to its support. It has disturbed the workings of the National Board of Health; has rendered the Marine Hospital Service almost powerless in that locality, and has done much to prevent the enactment of proper laws for the enforcement of quarantine by the Congress of the United States." According to the same journal, the Louisiana State Board of Health, which thus undertakes to guard the Mississippi Valley, receives only $6,000 a year besides "a scanty and contested pittance" from quarantine and registration fees.

Regulating Midwives in the City of Berlin.—The following regulations have been adopted by the Berlin Police Department. They contain important suggestions for the municipalities in this country: "Midwives, on commencing practice, are to notify the same personally to the Bezirks-Physikus within fourteen days, and at the same time to lay before him (1) their license; (2) the day-book; (3) the last edition of the Prussian "Handbook of Midwifery for Midwives"; (4) the instruments prescribed by the latter. They are required to treat their cases strictly in accordance with the instructions given in the handbook. They must keep a day-book after a prescribed pattern in which cases must be entered, and they must fill up the columns accurately, or permit the medical man they call in to do so. Besides the instruments prescribed, which must be kept clean and ready for use, they must always have such disinfecting material as is ordered. Every case of puerperal fever, as well as every maternal fatality, must be notified within twenty-four hours of verification of diagnosis or death to the Royal Sanitary Commission. They must also submit to subsequent examinations once in three years."

THE SIMS MEMORIAL FUND.

To the Medical Profession and Others throughout the World:

The great achievements of Dr. J. Marion Sims call for some more lasting testimonial than obituaries and eulogies. To him medical science is indebted for much brilliant and original work, especially in gynecological surgery. Those who have been benefited by his teachings and new operations, and such as have had the direct advantage of his personal skill are among the first to recognize and acknowledge this debt.

To him is due the honor of giving the first strong impulse to the study of gynecological surgery in America.

It is believed that the medical profession everywhere, the vast number of women who owe their relief from suffering directly to him, and those who realize the benefits he first made possible, will gladly unite thus to honor the man through whose original and inventive genius such blessings have been conferred upon humanity.

At the suggestion of many friends, therefore, the subjoined committee has been organized, and it is proposed that a suitable monument be erected to his memory in the city of New York.

To this end the active co-operation of the medical profession and the many other friends of Dr. Sims throughout the world is respectfully solicited. Contributions of one dollar and upward may be forwarded to the journal which has been constituted the treasury of this fund—The Medical Record, New York.

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Reports of Societies.

International Medical Congress.

EIGHTH SESSION,

Held at Copenhagen, Denmark, August 10–16, 1884.

BY CABLE TO THE MEDICAL RECORD.

(Concluded from page 188.)

THURSDAY, AUGUST 14TH—FIFTH DAY.

AT the General Session, 3.30 P.M., SIR WILLIAM GULL, of London, delivered an address

ON THE INTERNATIONAL COLLECTIVE INVESTIGATION OF DISEASE.

Speaking of the importance of the subject, he maintained that its proper consideration promised greater advances in knowledge than by the ordinary methods. The time had come when organized co-operation, as against scattered individual efforts, should be encouraged. This was, in fact, one of the purposes of the Congress and other similar medical organizations. The field of scientific medicine was too large to be compassed by any other means. The amount of work that could be accomplished by a systematic direction of numerous workers was practically without limit, and was proportionately valuable. By such means facts could be accumulated on a large scale, and be utilized accordingly. In conclusion he referred in detail to the admirable work of the Committee on Collective Investigation in the British Medical Association, and urged that the scheme be extended throughout the scientific world, in order that the results might be centralized, if need be, in the different medical congresses hereafter to be held. The subjects of acute rheumatism and contagiousness of phthisis had already been worked up by different committees of investigation, and had given some remarkably valuable results. The English and German Committees had both chosen the latter subject, and their conclusions were strikingly consistent.

MEETINGS OF SECTIONS.

Section on Surgery.—There was a discussion of the subject of

ANTISEPTICS IN SURGERY.

Professor Lister, of London, being absent, the discussion was opened by PROFESSOR ESMARCH, of Kiel, who, after some general remarks upon the principle of antiseptics, alluded to the advantage of permanent dressings for wounds. The rule was to thoroughly cleanse and disinfect the parts and then seal them with antiseptic coverings to prevent the subsequent entrance of germs. This dressing was kept applied as long as possible, consistent with cleanliness and the absence of constitutional disturbance. The general practice of German surgeons was to use catgut ligatures, the latter being completely absorbed in the wounds. Professor Esmarch applies the permanent dressings after main vessels are secured and before the removal of the tourniquet. He does not think it necessary in the large majority of cases to use drainage-tubes, but supports the deeper parts and keeps them in contact by pressure. Openings are left for the escape of drainage into the bandages, which are sterilized by dry heat and corrosive sublimate. Other antiseptics are occasionally used, but preference is always given to bichloride of mercury. The parts are sometimes supported by glass splints until healing is accomplished by first intention. The general treatment carried out is based upon the grand principles of absolute rest, perfect cleanliness, and thorough drainage.

Professor Mosetig-Moorhof, of Vienna, advocated the use of iodoform as an antiseptic in the dressings, but preferred simple cold water during operations.

Dr. Schede, of Hamburg, thought well of iodoform, but his best results were obtained when corrosive sublimate was used. With the latter erysipelas vanished and septic troubles were almost unknown. He was in the habit of employing the corrosive sublimate solution in the proportion of one to five hundred, and had yet to meet with the first case in which indications of poisoning showed themselves, although there were sometimes symptoms of tenesmus. Even children bore the corrosive sublimate dressing without any bad results.

The general principles of antiseptic treatment were endorsed by Professors Mikulicz, Neudorfer, Buchanan, and Schelkley, who followed with remarks, the only differences noted being in the methods of application.

Professor Koeberlé, of Strasburg, used only clean linen with which he wiped the wounds, and had noticed no erysipelas when the open method of treatment was followed.

Professor Plum said that the Danish surgeons agreed in the main with their German confrères, although the cost was somewhat of an objection to Esmarch's plan. Cleanliness was, after all, at the bottom of all antisepsis, and the soap and the brush, when properly employed, would work wonders. It was a question, after all, how simple we could make the matter, and how we could divest ourselves of useless paraphernalia.

Section on Medicine.—Professor Lépine, of Lyon, read a paper entitled "Clinical Observations on the Toxical Principles which are formed in Living Organisms," giving a full *résumé* of the literature of the subject, and presenting illustrations of the relations of cause and effect on the commoner variety.

Professor Leibermeister, of Tübingen, followed with a communication on the antipyretic treatment of acute infectious diseases, advocating the utility of employing the different well-known methods in particularly well-selected cases.

The subject of antiseptic treatment of the same diseases was next presented by Professor Bouchard, of Paris, who also discussed the different methods and their applicability to individual cases.

A general discussion then followed, in which Professors Rothé, Lepine, and Pribram joined.

Professor MacEwen, of Glasgow, read a paper on "Orthopedic Osteotomy," which was discussed by Professors Agston, Chiene, Schede, and Mr. Bryant and Dr. Robin. The general sentiment was in favor of MacEwen's operation in proper cases.

Section on Ophthalmology.—Papers read: "Determin-

ation of Refraction by Ophthalmoscope," by Professor Schmidt-Rimpler, of Marburg. This paper was duly discussed by Dr. Noyes, Mr. Berry, Dr. Yuler, Sattler, Grut, and Liebreich. On the "Artificial Maturation of Cataract," by Dr. Ed. Meyer, Paris; discussed by Drs. Moore and Samuelson. On "Infantile Blennorrhœa, its Prevention and Treatment," by Dr. Christensen, of Copenhagen. On "Inflammation of the Eye," by Dr. Martin, of Bordeaux.

Section on Diseases of Children.—Prof. Hirschsprung, of Copenhagen, presided. A paper was read by Dr. P. Rupprecht, of Dresden, on "The Choice of Antiseptics in the Treatment of Wounds in Children." He was followed by Dr. Sofus Meyer, of Copenhagen, who read a paper on the "Prophylactic Treatment of the Ophthalmo-blenorrhœa of the New-born." A paper was read by the President, Prof. Hirschsprung, on "Intestinal Invagination and its Comparative Frequence in Different Countries;" and one on the same subject by Prof. Ribbing, of Lund. Dr. A. Jacobi, of New York, read a paper on "Primary Sarcoma of the Kidney in the Newborn."

A GRAND BANQUET.

At five o'clock in the afternoon a grand banquet was tendered the members of the Congress by the Municipal Council of Copenhagen. Fourteen hundred guests were present. The tables were set in a large tent erected for the occasion upon the Custom House quay. The interior of the tent was decorated with the flags and coats-of-arms of the different nations. The tables were profusely ornamented with flowers, another evidence of the warm hospitality of the Danish ladies. After the courses had been finished, speeches were made by President Panum, and by Pasteur, Paget, and Virchow. Many of the guests went upon an excursion by steamers to Tivoli. The entertainments of the evening closed with a grand display of fireworks and electric lights. The whole city joined enthusiastically in the spectacle.

FRIDAY, AUGUST 15TH—SIXTH DAY.

PROFESSOR VIRCHOW'S ADDRESS.

PROFESSOR R. VIRCHOW, of Berlin, delivered an address entitled "Metaplasia."

He said that at the beginning of the present century the processes of life were considered to be merely chemical. Life and thought were bound to certain matter in the blood, which, becoming solid, formed tissues. Even Schwann said that cells were formed by a sort of crystallization of the plasma. These chemical doctrines were of English origin. John Hunter spoke of "plastic lymph." These doctrines were supported by the then physiological views of nutrition. The plasma was thought to supply food directly to the tissues, in fine, to feed them. As a consequence, the healing art was thought to consist mainly in regulating nourishment, *i.e.*, the supplies furnished the plasma. Virchow made the first step toward the cellular pathology thirty years ago, when he announced his doctrine *omnis cellula e cellula*. He said that the task for nourishment was to keep the cells alive. These cells then formed tissues and, indeed, to them belonged all the formative functions. The speaker contrasted the nutritive with the formative processes.

Differences in the matter supplied affected nutrition, but the formative process was the same, with the most varied nourishment. All organic operations, said the speaker, occur within cells, never outside of them. The speaker defined automatic nourishment of cells, showing that their nutrition supply was regulated by certain automatic checks, so as to be kept at the proper mean. He then spoke of the phenomena of growth and the production of new tissue forms, to which he gave the term "metaplasia." He described the various theories of bone formation, and showed the difference between ossification and calcification. He spoke also of the formation of bony marrow, which being a tissue of changing form, furnishes a good example of metaplasia. He explained the pathology of osteo-porosis and osteo-malacia. He referred briefly to the subject of the development of tumors. Lastly he spoke of the white blood-globules, and of their ability to form new tissue. In them metaplasia reached its furthest limits.

Dr. Lewis A. Sayre, of New York, gave some demonstrations of the application of his plaster-of-Paris bandage for the treatment of spinal disease, and was followed by Professor Tommasi Crudeli, who showed some microscopic specimens of red blood-corpuscles taken from the human subject suffering from malaria. The infected corpuscles responded to aniline and some of these were seen to contain colored particles. These he considered germs of bacilli. Healthy corpuscles refused the stain and contained none of the particles referred to.

MEETINGS OF SECTIONS.

Section on Medicine.—Professor Rosenstein, of Leyden, presented a paper on "Malarious Infection in Man," which was discussed by Professors Flint, Ewald, and Mahomed. Professor Grancher, of Paris, next read a paper on "Subacute Pneumonia," dwelling mostly on its clinical significance.

Section on Ophthalmology.—Dr. Gayet, of Lyons, read a paper on "The Results of Great Losses of the Substance of the Cornea," which was discussed by Professors Berry, Grut, Noyes, and Nieden. The subject of "Latent Squint" was presented by Dr. Grut, of Copenhagen, and was discussed by Dr. Noyes and others.

Section on Diseases of Children.—In the morning there was a joint session with the Section on Hygiene, and in the afternoon the regular session was held.

Dr. Schepelern, of Refsnaes, Denmark, read a paper on "The Treatment of Chronic Diseases of Children at Sea-Coast Hospitals," which was followed by a communication from Dr. Engelsted, of Copenhagen, on "Sea-Coast Hospitals for Scrofulous Children," especially with regard to the Refsnaes Hospital in Denmark.

In the afternoon session, Dr. Rauchfuss, of St. Petersburg, read a paper on "Croup Clinically Considered as a Well-limited Morbid Entity." This was discussed by Professor Virchow and others.

RECEPTION BY THE KINGS AND QUEENS OF DENMARK AND GREECE.

In the evening a reception was given the Congress at the Christiansborg Palace, by the Kings and Queens of Denmark and Greece. The affair was a brilliant one

and the most bountiful hospitality expressed the royal appreciation of the distinguished guests. After the enjoyment of a sociable converse and musical concert, the members were entertained at a sumptuous supper, at which the King of Denmark proposed the toast of the foreign members, which was felicitously replied to by Sir William Gull.

SATURDAY, AUGUST 16TH—SEVENTH DAY.

THE NEXT CONGRESS TO MEET IN WASHINGTON, 1887.

At 3.30 P.M. the Congress took up the subject of the place of next meeting. The Committee to whom the subject was referred, reported back a recommendation that the invitation to hold the next meeting in Washington, U. S., be accepted. There was a warm debate over the subject; the English members strongly supported the decision, however, and it was finally voted by a considerable majority to meet in Washington in 1887. After the vote was announced, Dr. J. S. Billings thanked the Congress in warm terms, and expressed his gratitude at the hospitality which had been extended to the guests. He was followed by Virchow and Sir Risdon Bennett.

The General Session concluded this day by congratulatory addresses in the different official languages. In French, by Professor Rauchfuss; in English, by Professor Jacobi; and, in German, by Professor Hirschsprung.

Professor Panum closed the Congress at five o'clock.

SECTION WORK.

Section on Diseases of the Eye.—Dr. Bjerrum, of Copenhagen, read a paper on "Refraction in Infants."

Professor Holmgrén, of Upsala, read a paper on the "Color Sense."

Mr. Yuler, of London, demonstrated the use and advantages of McHardy's perimeter and of Frost's artificial eye.

Dr. Klebs showed the method of using the electromagnet in removing bits of iron from the eye.

Section on Medicine.—Dr. Proschowsky gave a demonstration of sphygmographic and cardiographic tracings.

Dr. Joh. Butzen, of Copenhagen, read a paper on "The Different Action of the Japaconitine, the Pseudaconitine, the French and the German Aconitine."

Dr. Roussel, of Paris, read papers on the "Direct Transfusion of Living Blood," and upon "Medical Hypodermic Injections."

Dr. Maurice Dupont, of Paris, read a paper on the "Medical Use of Condensed Air in the Form of Baths and Douches." He showed illustrations of his new apparatus.

Professor Granger-Stewart, of Edinburgh, read a paper on the "Influence of Acute Infectious Diseases upon the Kidneys and their Functions."

There was a joint session of the Sections on Diseases of Children and Hygiene; the papers read were as follows: "The Normal Increase of Weight through the Latter Childhood," by Mr. Mating Hansen and Dr. Wahl, of Denmark; "Meningitis Tuberculosa in the First Year of Life," by Dr. Medin, of Stockholm; on the "Influence of Cold on Diseases of Children," by Professor Logroux; on an "Easily Curable Form of Infantile Spinal Paralysis," by Professor d'Espine.

At one o'clock the various sections adjourned, and after a lunch visited several of the hospitals of the city.

EVENING ENTERTAINMENTS.

In the evening a reception was given at the National Establishment. It was preceded by a concert and followed by a ball and supper. The total number of guests present was eighteen hundred.

The attendance in nationalities was as follows: Danes, 450; Swedes, 150; Americans, 64; English, 120; French, 118; Germans, 234; Austrians, 35.

The Congress is looked upon as a decided success, and as having been most admirably managed. The social features were attractive, but the hospitalities were judiciously lavished, so as not to interfere and crowd out the scientific work.

Obituary.

JOSEPH JANVIER WOODWARD, M.D.,

PHILADELPHIA, PA.

COL. JOSEPH JANVIER WOODWARD, Surgeon in the United States Army, died Tuesday morning near Philadelphia. He was born in that city in 1832. He received his education at the Philadelphia Central High School, where he was given the degree of A. B. in 1850, and that of A. M. in 1855, having acted as the valedictorian of his class. After receiving the first degree he entered upon the study of medicine, and in the spring of 1853 he was graduated from the University of Pennsylvania. He practised medicine in Philadelphia until August, 1861, when he was appointed an Assistant Surgeon in the regular army. He had already attained considerable prominence in his profession through the publication of a number of treatises on abstruse subjects, especially on the use of the microscope in the practice of medicine. He subsequently attained such eminence in this particular branch that he was regarded as one of the leading authorities in certain departments. He invented an instrument by which the myopic condition of the eye can be determined with accuracy. He served in the war, and distinguished himself by his gallant conduct. He was brevetted Captain, Major, and Lieutenant-Colonel on March 13, 1865, for faithful services.

On July 28, 1866, he was made Captain and Assistant Surgeon, and was promoted to the rank of Major and Surgeon on June 26, 1876. In 1866 he was selected for the important duty of editing the "Surgical and Medical History of the Rebellion." With this great work his name will always be inseparably connected. He also published a number of papers of great interest and value. Among them were "Address on the Medical Staff of the United States Army." "Remarks on Croup and Diphtheria." "Typho-Malarial Fever; Is it a Special Type of Fever?" "Remarks on Photographic Micrometry." "Application of Photography to Micrometry, with Special Reference to the Micrometry of the Blood in Criminal Cases." Report on "Medical Literature," and report on "Causes and Pathology of Pyæmia." When President Garfield was shot, on July 2, 1881, Dr. Woodward was in Washington in the Surgeon-General's Bureau. He was one of the surgeons first summoned to the bedside of the wounded President. He remained in constant attendance there until September 7th, when he retired in company with Drs. Reyburn and Barnes.

During his residence in Philadelphia Dr. Woodward was a member of the Philadelphia County Medical Society. He was also a member of the American Medical Association, of which he was the Second Vice-President in 1875; of the American Academy of Sciences, and of the Medical Association of the District of Columbia.

He was a delegate to the International Medical congress in Philadelphia in 1876.

Dr. Woodward will be especially remembered for his description and differentiation of typho-malarial fever, for his remarkable work in micro-photography, for his microscopical studies of the blood, and for his work in connection with the "Medical and Surgical History of the War."

Dr. Woodward was a man of positive views and somewhat abrupt though not unpleasing manners. He was an untiring and conscientious worker, never sparing himself, and he doubtless wore himself out before his time.

Reviews and Notices.

Traité de l'Affection Calculeuse du Foie. Par le Docteur Jules Cyr, Médecin Inspecteur adjoint à Vichy. Paris: V. Delahaye et Lecrosnier. 1884.
A Treatise on Calculous Disease of the Liver. By Dr. Jules Cyr.

The large experience which Dr. Cyr's position at Vichy has afforded him in diseases of the liver entitles him to rank as one of the authorities in such affections. The present work on gall-stones is the result mainly of his own observations, and in consequence bears a mark of originality which adds greatly to its readableness. At the same time he has not ignored the labors of others in this field, so that the monograph, in spite of the author's modest disclaimer, may justly be regarded as embodying all that is of value respecting biliary calculi. The chapters on diagnosis and treatment are especially valuable.

History of the Discovery of the Circulation of the Blood. By Henry C. Chapman, M.D., Professor of Institutes of Medicine and Medical Jurisprudence, in Jefferson Medical College. Philadelphia: P. Blakiston, Son & Co. 1884.

An interesting essay, in which the author shows that the discovery of the circulation of the blood, like all other great discoveries and movements, was the result of a gradual intellectual growth and not due solely to the acumen of Harvey. The credit of the discovery does not belong, in his opinion, to England, for Harvey, though by accident of birth an Englishman, was in thought Italian, and lived and died a student of Padua. Moreover the earlier workers, to whose investigations Harvey was indebted for the ideas which led to his grand discovery, were chiefly Latins or Italians.

The Relation of Animal Diseases to the Public Health, and Their Prevention. By Frank S. Billings, D.V.S., Graduate of the Royal Veterinary Institute of Berlin; Member of the Royal Veterinary Association of the Province of Brandenburg; Honorary Member of the Veterinary Society of Montreal, Canada, etc. New York: D. Appleton & Co. 1884.

The question of the susceptibility of man to infection from animal diseases is one that has begun to attract considerable attention of late among hygienists and physicians, and that promises to become of still greater importance in the future. The more the subject is studied the more intimate is seen to be the relation between diseases of man and of the lower animals, and a knowledge of some at least of the more common infectious diseases of animals is daily becoming more necessary to the physician who seeks not only to cure but to prevent sickness in the human race. On this account the appearance of the work before us is timely. It treats of the higher purposes of veterinary medicine in seeking, by a careful study of animal disease, to prevent its extension to man. The work is divided into three parts, treating respectively of the diseases of domestic animals, the history of veterinary medicine, and the means of prevention of disease. Nothing is said of treatment, as the book is not intended to be a treatise on veterinary medicine, but is rather adapted to the wants of the hygienist and of all those interested in the subject of preventive medicine. The author is very dogmatic in his assertions, and is apt at times to be rather severe in his strictures on some of his co-laborers in the same field; but this is a fault, if fault it be, common to all pioneers in a new subject who are thoroughly in earnest and who are of necessity, as the author confesses himself to be, enthusiasts. The book might, we think, be somewhat condensed with advantage, for to the general reader whose time for studies of this sort is limited, a volume of 440 octavo pages is a little formidable.

Brain Exhaustion, with some Preliminary Considerations on Cerebral Dynamics. By J. Leonard Corning, M.D. New York: D. Appleton & Company. 1884.

In these days of hurry and worry the questions considered in the book before us have assumed a measure of importance unknown to our fathers. We perhaps work no harder, but we work more irregularly and with less regard for the necessity of relaxation, than those before us did. The demands upon our thinking apparatus are very great, but we take little care to see that the apparatus is kept in good working order. But the time comes when the brain refuses to work at such high pressure, and if then it is urged on beyond its strength it either stops or breaks away from all control. In this work on the exhaustion of the brain, the author presents, in a very clear and intelligent form, the various causes and symptoms of the complaint, and points out the principles upon which its treatment should be pursued. He insists very strongly upon the damage to the mental faculties resulting from the custom of late and protracted evening amusements and the loss of sleep entailed thereby. He also urges the necessity of a meat dietary for brain-workers, and shows very clearly the mental superiority of meat-eaters over vegetarians. The subject of the book is indeed worthy of careful consideration, and it is presented by the author in such a pleasant and attractive style that the reader will find himself entertained as well as instructed.

WAS HUMAN FLESH EATEN BY ANY OF THE GREELY PARTY?

To the Editor of The Medical Record.

Sir: I address this note with a view of possibly obtaining some more definite information concerning the microscopical examination of the contents of the stomach of Lieut. Kislingbury, and of the other Arctic dead. According to the reports of the physicians, pieces of epidermis, etc., removed from the stomach and intestines, were recognized as unquestionably human.

I presume that the eaten flesh was subjected to some mode of preparation before mastication; it is also certain that the digestive process must still further have changed the tissues, and that, in spite of the general preservation, a certain amount of disintegration and probably decomposition must have followed.

Was it possible to make such a microscopical examination as would justify the unequivocal deduction, from this alone, that the "chyme mass" was of human origin? Or was the conclusion a partial inference from the condition of the body and the reports of the survivors, which leave no doubt in the mind of any of us as to the sad occurrence of cannibalism?

In the interest of "expert" testimony, and exact science, the latter of which so often unjustly suffers obloquy from the former, can our colleagues, on the basis in question, leave their conclusions unqualified, that the stomach contents were undoubtedly human?

I am yours truly,

H. N. Heineman, M.D.

49 West Fifty-seventh Street,
August 19, 1884.

Correspondence.

THE ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION, AT BELFAST, IRELAND

(From our Special Correspondent.)

BELFAST, August 2, 1884.

THE Belfast meeting may be pronounced a success. A large number were present, and the general and sectional meetings were well attended. Belfast is a large town, and possesses ample accommodation for a crowd of visitors. The building in which the meetings were held—Queen's College—is one particularly well adapted for the purpose to which it has been devoted during this week, and the college grounds, together with the adjoining botanical gardens, formed a pleasant resort for members in the intervals between the meetings. The only disadvantage has been in the location of the college, viz., between one and two miles from the chief hotels. Some could get accommodation near the place of meeting, but this was necessarily limited, and the majority of those present had to seek quarters in the centre of the town. To get to the meetings, therefore, they either had to walk, ride by tram, or take an Irish car or other vehicle.

The number of members of the Association present has been about five hundred odd, and if to this be added the medical visitors and delegates, and the medical students of Queen's College (who were permitted to attend), the total number probably exceeded six hundred. A number of American physicians were present, among them being Dr. Lewis H. Sayre, of New York; Dr. John Shoemaker, of Philadelphia; Dr. Frederick Hyde, of Cortland (delegate from the American Medical Association), and Dr. A. Jacobi, of New York. In all, I think, some sixteen American medical men were present. From other distant localities there also came representatives, viz., from Guernsey, Paris, Geneva, Jamaica, and even India.

On the first day, Tuesday, members began early to assemble, register their names and addresses, get their tickets, and ask for letters and telegrams at the temporary post-office erected in the porter's lodge at Queen's College for the convenience of members during the meeting. The latter, as in previous meetings, proved a very great convenience to members and others present, and the post-office official placed in charge of it had indeed a very busy time. Some little hitch occurred at first in the arrangements for the registration of members, owing to the official books and tickets having been delayed by the railway companies. This was promptly got over by the printing and issuing of temporary tickets, which were duly exchanged for the proper ones when the latter arrived.

The proceedings might be said to formally commence with the first general meeting, which took place in the library of Queen's College, and was well attended. The library is a detached building, standing in the college grounds, and the large central hall surrounded by a gallery afforded ample seating space. This room was devoted to the general meetings and to the Council meetings. The first general meeting was preceded by a short Council meeting, at which the following gentlemen were present: Chairman—Mr. C. G. Wheelhouse, President of the Council; Dr. James Cuming, President-elect of the Association; Dr. A. T. H. Waters, President; Dr. T. Bridgwater, Dr. Alfred Carter, Dr. Alfred Carpenter, Dr. Deas, Dr. G. F. Duffey, Dr. Balthazar Foster, Dr. Grigg, Dr. C. E. Glascott, Dr. Eyton Jones, Dr. W. G. V. Lush, Dr. McVail, Dr. W. Moore, Dr. C. Parsons, Dr. Edward Waters, and Messrs. C. Macnamara, J. Prankerd, and T. Sympson.

At the Council meeting 88 gentlemen were elected members of the Association, and other business was transacted.

The general meeting opened at 3 P.M. Dr. A. T. H. Waters, President, in the Chair. He proposed that the minutes of the last meeting should be taken as read, which was adopted unanimously. Dr. Waters made a few remarks on the prosperous state of the society and its continued increase in numbers. During the past year 1,040 new members had been added to the Association, while only 139 members had died. The total number was now nearly twelve thousand—to be exact, he believed it was 11,800.

He then resigned the chair to Dr. Cuming. A vote of thanks to Dr. Waters was then proposed by Dr. John Moore, of Belfast, seconded by Dr. Felce, of London, and carried unanimously. Dr. Waters was elected a Vice-President of the Association for life.

Mr. Wheelhouse then proposed the adoption of the report of the Council and the financial statement for the year 1883. Some exception was taken by some gentlemen to the sum of £1,660 put down as paid to contributors to the *Journal*, and it was asked for what was this sum paid. It was remarked that most of the original contributions were offered gratuitously to the *Journal*, and asked whether this amount was paid for editorial matter? It was explained that it was paid for scientific reports and various matter furnished not by the editor or his assistants, but by various gentlemen all over the country. Details could not be furnished of the individual articles for which payment was made, but they were such as were approved by Mr. Ernest Hart in his editorial capacity, and by the *Journal* Committee. The financial statement submitted showed that the total editorial expenses were £3,000 odd, yearly. The financial statement and the report of the Council were adopted.

Mr. Macnamara, of London, was then proposed by Mr. Wheelhouse, of Leeds, as Treasurer of the Association for the ensuing three years, in the place of Dr. Wade, whose term of office had expired. The motion was made by Dr. Rogers and supported by Dr. Edward Waters, and carried unanimously. A letter was read from the late Treasurer suggesting improvements in the mode of signing cheques. Dr. Wade thought there ought to be an additional signature before moneys were paid away. The letter was referred to the Council for consideration. A motion to that end by Dr. Ward Cousins was passed, and then a motion was made by Dr. McVail (in the absence of Mr. Dix) providing for the payment out of the general funds of the Association of the travelling expenses of the members of the Council to and from the Council meetings. Under the new constitution of the Association, as amended last year, the Council is now to be a body representative of the Association at large, each branch electing its own representative. Dr. McVail urged that it was desirable that the members of the Council should attend, and to insure the distant members doing so, their expenses should be paid. It had been objected that it was unnecessary, and that there were in every branch men of means and leisure who could attend; but Dr. McVail contended that these were not the men that were wanted, but they wanted representatives of the rank and file of the profession. It had been urged that distant branches might nominate metropolitan members to represent them, but this defeated the very object of having a representative Council. After prolonged discussion and speeches by Dr. Alfred Carpenter, Mr. George Brown, Dr. Bernard O'Connor, Dr. Balthazar Foster, Mr. Brindley James, Mr. Ernest Hart, and others, the motion was finally negatived, as it was when brought forward at the Liverpool meeting last year. Some angry feeling was exhibited in the course of the discussion. Several speakers maintained that the provincial members did not attend well, and could not be expected to, if they not only had to neglect their practice but pay their own expenses. It was alleged that the management was practically in the hands of the metropolitan members. At some meetings it was stated that a very large proportion of those present

were metropolitan members, owing to non-attendance of provincial members. Mr. George Brown quoted figures from the *British Medical Journal* in support of this view, and energetically exclaimed that "the members of the Council were dummies." Mr. Hart maintained that the average attendance of the country members as compared with the metropolitan was very good. One gentleman exclaimed that "those were the dummies who did not come."

The meeting then adjourned for dinner, and reassembled in the library at eight o'clock. The building was illuminated with the electric light generated by an engine temporarily erected for the purpose.

On assuming the chair Dr. Cuming delivered his presidential address, which you have already published, and which was warmly received, and the usual vote of thanks was then passed.

Lengthy discussion then took place on motions brought forward by Dr. Bernard O'Connor, which were successively negatived. The motions were to the effect of permitting members of branches to elect members to represent them who did not necessarily reside within the area of the branch, so that distant branches could be represented by members who resided near London. The last motion fell through for want of a seconder.

A somewhat disorderly scene then took place in connection with a motion brought forward by Mr. George Brown. He was finally declared out of order, and the meeting terminated between ten and eleven o'clock.

At the second general meeting on Wednesday, at eleven, it was reported that Dr. Balthazar Foster had been elected President of the Council for the ensuing three years. A vote of thanks was passed to Mr. Wheelhouse for his past services in the same capacity. It was announced that Cardiff had given an invitation to hold the next annual meeting in 1885 in that town, and this was unanimously accepted, and Dr. W. T. Edwards, senior physician to the Glamorganshire and Monmouthshire Infirmary, chosen President-elect. Dr. Edwards returned thanks. Dr. Ord then delivered the Address in Medicine (which we publish in our present number). A vote of thanks to Dr. Ord was then proposed by Dr. A. T. H. Waters, of Liverpool. He was sure they would all agree with him that the address had been a very able and interesting one. Dr. Ord had travelled over a wide field, and had treated his subject with great success. The important relations of reflex action in the human system had long occupied their attention, but he thought Dr. Ord had placed before them more forcibly perhaps than it had been done before the important influence of the nervous system in the production of chronic rheumatoid arthritis. He (the speaker) had seen cases of this disease in elderly people, which he felt fully convinced must be traced to neurotic origin. He would only remark that the influence of the nervous system on the production of disease no doubt required very deep, careful, and profound study; and perhaps the lines of thought which they had had laid down by Dr. Ord would give them much material for reflection. He thought an address of that kind was not only eminently scientific but essentially practical.

Professor Gairdner, of Glasgow, seconded the resolution. He came there very early that morning in order to obtain a good place to hear Dr. Ord, but when the President of the Council pounced upon him at once with an offer of the duty he was then performing, he felt in the position, not of the early bird that caught the early worm, but of the early worm snapped up by that watchful and ever wary bird the President. He could say that, having followed the course of Dr. Ord's investigation, he had never read a page, word, or line of his writing which did not bear the mark of something to be very carefully and deliberately thought over. Under those circumstances, it would be a very poor compliment to Dr. Ord to there enter into anything like a discussion upon the address they had heard. As a teacher of medicine, he (the speaker) was compelled by his office, as it were, to study systematically the turns and currents of opinion, and it was extremely interesting to him to note, and to accentuate the fact, that the drift marked by such addresses as that to which they had listened was decidedly in favor of solidism. All he could say there then was that Dr. Ord had made a most powerful pleading in favor of the neurotic origin of disease, which they had been in the habit of ascribing to other sources. They were all insensibly biassed by the systematic views which they took of things, but they must admit that the facts of science were too complex for them, and would bear looking at from many points of view.

The motion was carried by acclamation.

Dr. Ord having acknowledged the vote in a few words, the new Council for 1884–85 was announced, and the Association adjourned.

In the evening a *conversazione* was given in Queen's College by the President of the Association and the Executive Committee. In spite of the unfavorable weather —it raining heavily during the evening—this was very numerously attended. To this ladies were admitted. The college was brilliantly illuminated by the electric light, and presented a festive appearance. The rooms were crowded to overflowing.

At the third general meeting Dr. Redfern delivered his address. At the fourth general meeting Dr. Kidd delivered his address on "Obstetrics," which was cordially received and the usual vote of thanks given.

At two o'clock the concluding general meeting was held in the library, when the discussion on medical reform was continued by various gentlemen, and the reports of the Parliamentary Bills Committee, Habitual Drunkards Committee, Scientific Grants Committee, and the Collective Investigation Committee.

In the evening a reception by the Mayor in the Ulster Hall was numerously attended.

SECTIONS.

Section on Surgery.—Sir W. MacCormac delivered the address in the Section on Surgery, and spoke of the advances in visceral surgery—cerebral, thoracic, abdominal—and also of gastrostomy, the early history of which was disastrous, but which he now considered justifiable, and referred to two recent cases of malignant disease in which he had performed the operation with considerable benefit to the patient and prolongation of life. He recommended the operation to be performed early enough in such cases, and considered antiseptics gave a good chance. He spoke of Howse's plan, of dividing the operation into two parts, as removing practically all risk. He then spoke of the radical cure of hernia, but preferred the term radical treatment. He said the operation was not new but old; it was easily done in that for strangulated hernia as a step in the operation. This was a great advantage, and he thought in strangulated hernia the radical treatment, by excising a portion of the sac, should always be done. In congenital inguinal hernia he believed a radical cure could be effected. He then referred to the operation of thyroidotomy. It was one of the most formidable and difficult operations in surgery. Its dangers were mainly two, viz., sepsis and bleeding. To avoid the latter he suggested the ligature of the vessels first. He questioned Kocher's views as to the liability to myxœdema and cretinism as a sequel of removal of the gland; but he said that neither of these results had ever followed partial removal of the gland, and in many cases this was sufficient. He spoke favorably of the operation of ligature of the isthmus of the thyroid in some cases.

On Wednesday morning at 9.30 Dr. Sayre gave a special demonstration of the application of plaster jackets by his method on some living patients. After MacCormac addressed there was a discussion on the treatment of spinal curvatures, introduced by Dr. Sayre.

Speeches by Messrs. Bernard Roth, C. B. Keetley, E.

Freer, and others. Dr. Sayre replied and defended his views. He opposed the application of heavy metal splints and apparatus. He showed a little apparatus, consisting of some vertebræ strung on a wire so as to represent a curved spinal column, and showed that any force applied to the vertebræ, so long as each end of the column remained fixed, merely altered the position of the distortion, but did not remove it, while extension did so at once. He referred to cases in which the application of his apparatus had been followed by immediate benefit, and mentioned a case in which a patient had left the hospital and resumed hard labor soon after treatment by this method. Referring to different apparatuses, he said he had two wagon loads of them at home. He considered plaster superior to felt. Dr. Sayre was very well received, and his remarks greeted with loud applause. Perhaps the largest audience in any section was that which assembled to hear Sir William MacCormac's address, and the subsequent debate on the plaster jacket. Dr. Sayre repeated his demonstration on Friday morning.

Section on Medicine.—In the discussion on albuminuria Dr. George Johnson opened it, and defended his theory. He considered the limited area of the changes in the walls of the arteries was an objection to the theory of morbid blood. Speaking more particularly as to treatment, he said exclusive milk diet was often good in recent cases. He had known a patient of robust frame subsist for years on about a gallon of skimmed milk daily, and nothing else, except when travelling and unable to obtain the milk. He demonstrated the picric-acid tests for sugar and albumen, seven grains in one ounce of boiling water gave a saturated solution. He said in testing by this method never omit to boil, because picric acid may precipitate urates, which are dissolved on the application of heat. He said he considered the only test for albumen equal to the picric-acid tests was the potassio-mercuric iodide test with citric acid, and this was complicated. He then demonstrated the picric acid test for sugar.

One of the secretaries then read a letter on the subject from Sir Andrew Clark, Bart., who said that there was a non-renal form of albuminuria which it was important to distinguish from renal. He said this was sometimes met with for a few days before and after each menstrual period; also from albumen from vaginal and other secretions, bladder tumors, etc., in women addicted to impure habits. He spoke of functional albuminuria, and described four forms, viz.: nervous and oxaluric, mostly in the young; hepatic and gouty, mostly in the old. These were worthy of especial study. He said he had known albuminuria come on after a competitive examination in three out of twenty candidates. He had known temporary albuminuria in a gouty man after attending a public meeting. He remarked that oxaluria, high tension in the blood-vessels, and excess of urea, were followed mostly before long by albuminuria. He spoke of the importance of study of the causes.

On Thursday afternoon a discussion took place on the "Causes of Phthisis," introduced by Dr. Douglas Powell, of London, who said that he doubted much the contagiousness of phthisis. He remarked that many so-called cases of contagion were very strange. A phthisical man marries three wives, who all die of the disease, while he continues to live. How is it that while evolving sufficient of the poison to kill all three wives, it is not present in his body in sufficient intensity to kill him? He considered that it often began with inflammation at the apex of one lung. He remarked that if we could cremate all the bacilli we should still have phthisis left, and other bacilli would be evolved in time.

Dr. Ward Cousins, of Portsmouth, made a very spirited and energetic speech. He said he did not believe in antiseptic inhalations destroying the bacilli. We could not use sufficiently powerful antiseptics to destroy bacilli embedded in the substance of the lung. He protested against covering up the mouth and nose with inhalers to keep out the bacilli which were in the atmosphere. What was the use of that when they were already in the lung? He remarked that the lower classes were particularly averse to a breath of fresh air coming near them, especially such as were suffering from chest diseases. The theory of Koch had given an immense impetus to the practice of antiseptic inhalations. Dr. Cousins employs inhalations in many cases of chest disease, but he advocated open inhalation. He remarked that he believed that free expectoration was very desirable in cases of phthisis. Referring to the late Dr. Ramadge, he said Dr. Ramadge was laughed at in his day. Dr. Ramadge invented a whistle for his patients to use. But Dr. R. was quite right in his theory. It was of the utmost importance to keep at work, and inflated with air, that portion of the lung which was not yet attacked by the disease. Dr. Cousins referred to different inhalers, and after speaking of some which were heavy, said one had been brought out which only weighed three drachms. He then showed his own, which he said only weighed one drachm twelve grains. He had nasal inhalers to wear on either nostril, changing from one to the other when you pleased. He had also a little inhaler for the mouth, to hold in either corner, and remarked that you could go on talking with it in. He created great amusement by continuing his speech with the oral inhaler first in one corner of his mouth and then in the other.

Professor Gairdner of Edinburgh referred to the views of Dr. MacCormac, of Belfast, who held that the cause of phthisis was breathing and rebreathing the same air. He could not subscribe to Dr. MacCormac's views in their entirety, nor could any one, he thought, in the present state of pathology. He could not believe that rebreathed air in itself produced phthisis. He referred to miners' lung and other conditions caused by air laden with foreign matter—these were not phthisis. He, however, believed impure air to be an important condition in the causation of phthisis, even more so than exposure to cold, wind, or damp. He supported Koch in his views. He also believed in the transmission of phthisis hereditarily, but he did not see how this could take place by means of bacilli. He could not conceive of bacilli being given off in the semen or finding their way into the ovum.

In the Section on Public Health, on Wednesday, Dr. Barthe de Standfort, of Dax, read a paper in French, on the "Disinfection of Ships after Infective Diseases," in which he maintained it was impossible to thoroughly disinfect a vessel in the number of days allowed for quarantine. He believed the best disinfectant to be sulphurous acid, which had been recommended to the United States Government, but not adopted on account of its cost. He held that an infected vessel should be thoroughly washed, then fumigated for twenty-four hours, and afterward subjected to very complete ventilation for four or five days.

He was well received, and at a later stage warmly thanked his audience, and said he should carry back to France a lively recollection of his kindly reception in Belfast.

Mr. Kirker, R.N., read a paper on "The Cholera Epidemic in Egypt, 1883," in which he said there were only 8 victims in Port Said, a filthy town of 17,000 inhabitants, and thought that Koch had not sufficient warrant for predicting that the disease would spread from Toulon all over Europe. He believed that the British Isles would this year escape, chiefly on account of recent changes in the weather, with its rain and brisk breezes. He regarded a hot, stifling, stagnant condition of the air as the great danger, but while purifying winds lasted he would say, "Fear not the cholera of Toulon and Marseilles." It was more important to find out the conditions of life of the individual in his home than to look for germs.

Dr. Cullimore, of London, in a paper on "Quarantine," said that people would prefer the risk of cholera

to the rigid application of quarantine, which was not likely to be carried out successfully for any length of time. Quarantine by sea could be defended by arguments inapplicable to sanitary cordons and other attempts at isolation on land. A well-managed ship at sea lying off a port afforded the opportunity of stamping out a disease which was never offered on land.

Dr. Davies, Medical Officer of Health for Bristol, condemned compulsory notification, which he found quite unnecessary in his district of 220,000 inhabitants. He had seen as much cholera as most practitioners for in the first epidemic 2,000 died in Bristol. When threatened they put their drains under disinfection with large quantities of sulphate of iron. Ships were entering the port from Marseilles and cases might be brought in, but he defied them to spread. He did not much believe in gaseous disinfectants.

Dr. Cameron, M.P., Medical Officer of Health for Dublin, and President of the Section, said he did not believe in land quarantine, but he did in a well-established naval quarantine. He was in favor of washing the interior of infected dwellings with soap and water. He found dry chlorine and sulphurous acid would not kill bacteria but solutions would.

Dr. Grimshaw, Registrar-General for Ireland, spoke in favor of the notification of diseases, and though the results had not up to the present time been favorable, he thought that was because the notification had only been carried out partially. To be effective it would require to be reciprocal between the various districts, and even through the country at large.

THE MUSEUM.

The annual exhibition of objects of interest in connection with medicine, surgery, and the allied sciences, took place in the Exhibition Hall, Botanic Gardens, and in the Queen's College. *Subsection A.*—1. Preparations, diagrams, casts and models of anatomical and pathological objects, microscopes and microscopic preparations. *Subsection B.*—2. Surgical and medical instruments and appliances, thermometers, and other instruments for scientific investigation. *Subsection C.*—3. Foods, drugs, chemicals, and pharmaceutical preparations. *Literary and Sanitary Subsection D.*—4. New medical books. 5. Ambulances, carriages, and other means of locomotion for the use of medical practitioners. 6. Sanitary appliances, including drawings, models, and apparatus, illustrative of the ventilation of hospitals, public buildings, and private dwellings. 7. Plans and models of hospitals, public buildings, and private dwellings, constructed upon the most improved hygienic principles. 8. Recent improvements in hospital furniture.

In the Pathological Section I noticed more particularly the following among many other objects. Sketch of elephantiasis labii and plaster cast of the tumor—removed by Mr. Fagan, of Belfast. Specimen of male generative organs, showing operation of cleft urethra as practised among the aborigines of West Australia—Dr. W. Whitle, Belfast. Ruptured intestine caused by crush without external injury—Dr. James Barrow, Belfast. Recent Colles' fracture, third day—Dr. James Barrow, Belfast. Several specimens (about forty) of Colles' fracture—from Queen's College Museum. Bread-cart fracture of tibia and fibula—Dr. James Barrow, Belfast. Colored drawings of skin diseases—Dr. C. F. Moore, Dublin. Ten jelly preparations of eyes, showing various diseased conditions—Mr. Juler, London. Thirty eye preparations—Mr. A. Hill Griffiths, Manchester.

In the Surgical Instrument Department there were exhibits by many of the leading firms. Messrs. Steel & Sons, of Belfast, showed specimens of surgical and other instruments plated by them. Dr. C. Godson exhibited a thermostatic nurse for the bringing up of prematurely born infants, and a four-bladed perforator. He gave a demonstration (on the fœtus) of the latter on Friday, August 1st. Messrs. Wilson & Son, of Harrogate, exhibited Dr. Oliver's urinary test-papers. Among them was a new cupric test-paper for sugar. A paper is boiled in a drachm of water for a few seconds, then removed, the solution reboiled, and one drop of the suspected sugar added, when, if any be present a yellowish opacity appears throughout the fluid.

SPECIAL MEETINGS.

Medical Sickness, Annuity, and Life Assurance Society.—The First Annual Meeting of the Medical Sickness, Annuity, and Life Assurance Society was held in the Greek Lecture Room, Queen's College, on Thursday, July 31st, at 12.30 in the afternoon.

New Sydenham Society.—The Annual Meeting of the Society was held on Thursday, July 31st, at 9.30 o'clock, in the Greek Lecture Room, Queen's College—Sir W. MacCormac in the Chair.

Poor Law Medical Officers' Association.—The Annual Meeting of the Association was held on Wednesday, July 30th, in the Greek Lecture Room, at 1 o'clock in the afternoon. Dr. Joseph Rogers, of London, Chairman of Council, presided.

Irish Graduates' Association.—The Annual Meeting of the Association was held on Wednesday, July 30th, at 5 P.M., in the Library, Queen's College. The President of the Irish Graduates' Association, Professor G. F. Yeo, M.D., was in the Chair.

Meeting of Members of the Royal College of Surgeons.—A Meeting of Members of the Royal College of Surgeons was held in the Greek Lecture Room, on Thursday, July 31st, at 5 o'clock in the afternoon.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE HOLIDAY SEASON AND THE HOSPITALS—CHOLERA AND PRECAUTIONS AGAINST IT—OUTBREAKS OF ENGLISH CHOLERA—THE VOLUNTEER AMBULANCE CORPS.

LONDON, August 9, 1884.

THE holiday season may be said to have fairly set in, and although Parliament is still sitting, both doctors and their patients are running off to the country wholesale. At many of the hospitals a large proportion of the staff have gone off for their holiday, and left the bulk of the work to be done by a few of their junior colleagues. At the larger hospitals August and September are not by any means the worst months to see hospital practice. It is true that then most of the ornamental members of the staff are away, but so are the great majority of the students, and cases can be examined at leisure without the overcrowding met with during the session.

No case of Asiatic cholera has yet occurred in Great Britain, although several false alarms have been raised. Any ships arriving from which there has been any reason to dread infection have been promptly disinfected. The Metropolitan Board of Works are taking measures to deodorize the sewage of London at a daily cost of between seven and eight hundred pounds. I understand that at present about thirty tons a day of chloride of lime are being used, and three or four tons of permanganate of potash. The College of Physicians has issued a paper of directions as to precautions to be taken against the cholera.

Several outbreaks have occurred of so-called English cholera in different parts of the country, and some deaths are reported. A deficiency in the water-supply is alleged to be the cause. This has doubtless led to the use of impure water.

The Volunteer Ambulance Corps got up amongst the students of the London hospitals has already attained some success. I believe nearly every one of the eleven medical schools in London has now its own corps. Charing Cross Hospital contributes perhaps the largest number, although having by no means the largest number of students. This is explained when I state that the

movement was started largely through the efforts of Mr. Cautlie, one of the surgeons to that institution. The total number of members enrolled now reaches nearly two hundred. I am afraid that many of them have not as yet learned to observe due discipline, as I have been informed by a member that, at some of the parades which have taken place, about half of those in the ranks were talking and laughing. In the corps of some hospitals too large a number of officers have been appointed, so that at some drills more officers than men have made their appearance.

One must not, however, be too captious, especially considering that it is volunteer work, and work, too, rather outside the area of ordinary medical studies. It is quite as laborious as cricket or foot-ball, but probably not so enjoyable. Lifting about heavy men and manœuvring with heavy stretchers, is by no means play in the hot weather we have lately had. Four bearers carry each stretcher, but one of the movements in the drill consists in transferring the whole weight to the shoulders of one bearer, leaving the other three free.

The utility of the organization will, it is thought, mainly consist in the fact that, when its present members have gone through their hospital career and are scattered all over the country, each of them will, so to say, form a centre whence a similar movement can originate. In remote country districts each medical man who has been a member of the Volunteer Ambulance Corps will be competent to start a local corps, drill and train it. The advantage this will be, should we ever be at war, is obvious.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August 10 *to August* 16, 1884.

BARTHOLF, J. H., Captain and Assistant Surgeon. Relieved from duty at Vancouver Barracks, Wash. Terr., and ordered to take station at Portland, Ore. S. O. 114, par. 1, Headquarters Department of Colorado, August 1, 1884.

HEIZMANN, C. L., Captain and Assistant Surgeon. Ordered to proceed to Fort Ontario, N. Y., and report for duty. S. O. 163, par. 3, Headquarters Department of the East, August 13, 1884.

KANE, JOHN J., Captain and Assistant Surgeon. Granted leave of absence for one month. S. O. 160, par. 1, Headquarters Department of the East, August 10, 1884.

Official List of Changes in the Medical Corps of the U. S. Navy, during the week ending August 16, 1884.

BOGERT, E., Medical Inspector. To be Fleet Surgeon, Asiatic Squadron.

BABIN, H. J., Surgeon. Detached from U. S. S. Minnesota. Ordered to Marine Rendezvous, New York.

WHITING, R., Passed Assistant Surgeon. Detached from Marine Rendezvous, New York. Ordered to Naval Academy, as Member of Examining Board

COOKE, G. H., Surgeon. Ordered to Naval Academy, as Member of Examining Board.

RIXEY, P. M., Passed Assistant Surgeon. Detached from special duty at Washington. Ordered to U. S. S. Lancaster.

WOOLVERTON, T., Surgeon, Ordered to U. S. S. Minnesota.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending August 16, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
August 9, 1884	0	26	35	3	76	28	0	0
August 16, 1884	2	30	34	2	52	24	0	0
Deaths.								
August 9, 1884	0	7	7	3	20	12	0	0
August 16, 1884	0	3	2	2	7	12	0	0

GUM AMMONIAC contains a small amount of volatile oil which is somewhat irritating to the skin and mucous membranes, and is eliminated through the bronchial and perhaps the mucous membranes. It is chiefly used in chronic bronchitis and bronchorrhœa, but is far more useful in mucous and torpid conditions of the stomach and bowels and perhaps urethra. A pill with one or two grains of aloes and the same of ammonia is often better than the aloes and myrrh pill. Some attribute virtues to it in cirrhosis of the liver and other organs, but muriate of ammonia is better.

HYDROCHLORIC ETHER, or chloride of ethyl, or muriatic ether, is almost identical in its effect with sulphuric ether. But it is so volatile and inflammable as to be almost unmanageable in practice. It is sometimes put in Hoffmann's anodyne as an agreeable substitute for sulphuric ether. Hydrochloric or muriatic ether is used in medicine in solution, and is formed in the muriate tincture of iron, where it is highly prized, and to which more could be added to great advantage.

HYDROBROMIC ETHER is obtained from bromine and alcohol in the presence of phosphorus. It is colorless, volatile, has a very strong ethereal odor, and a warm, sweetish taste. It burns with difficulty and is sparingly soluble in water, but is soluble in alcohol and ether. It has the same effects as hydrochloric ether, and produces anæsthesia without excitement or suffering. It has been inhaled for sleeplessness. It may be used in place of hydriodic ether.

TO OBTAIN HYDRIODIC ETHER, distill absolute alcohol and hydriodic acid together, or alcohol, phosphorus, and iodine. It is non-inflammable, but has a peculiar penetrating, powerful ethereal odor. It is nearly insoluble in water, but soluble in alcohol. Exposed to air and light it liberates iodine. Dose: ten or fifteen drops inhaled several times a day from a handkerchief to bring the system rapidly under the influence of iodine in chronic bronchitis and consumption, but more especially in leucocythæmia, pernicious anæmia, enlargement of the liver and spleen.

ACETIC ETHER is made from acetate of sodium, 8 parts; rectified spirits, 5 parts, and sulphuric acid, 10 parts; distilled together. Sulphuric acid is first formed. It is colorless, limpid, and volatile, having an agreeable refreshing ethereal odor, and is less inflammable than sulphuric ether. It dissolves in all proportions in alcohol and ether, also in eleven or twelve parts of water. It dissolves a little phosphorus and sulphur. When inhaled it produces perfect unconsciousness, without as much previous struggling as sulphuric ether, and is less volatile. From its pungency and agreeable odor, its stimulant and anti-spasmodic qualities, it is used for several of the

minor purposes of sulphuric ether, especially in syncope and in nervous agitation. Dose, 30 minims, properly diluted. Externally, it may be applied wherever sulphuric ether is appropriate. Its agreeable smell and almost equally powerful action renders it a good substitute for sulphuric ether in Hoffmann's anodyne, in the treatment of flatus and gastralgia, but especially in nervous or hysterical sick-headache. It is also used in minor operations where only the first stages of ether action are required.

Formic Ether was discovered by Bucholz in 1782. It is made from 8 parts formate of soda, 7 parts alcohol, and 11 parts sulphuric acid, which are distilled together. It has a strong agreeable odor, like peach kernels, but a pungent taste. It dissolves in nine parts of water and in alcohol. It readily undergoes decomposition into alcohol and alkaline formiates through the alkali of the blood. It lowers the temperature 3½° C., and induces signs of asphyxia, but not so markedly as chloroform; also muscular relaxation and anæsthesia for several hours; 1 or 2 c.c. and 4 to 6 c.c. in dogs, cause less asphyxia, but more somnolence and lowering of temperature, without complete abolition of sensibility, 6 or 8 grains causes only drowsiness in man; it gets into the urine. Formic and acetic ethers are largely used in combination with other compounds of methyl, ethyl, and amyl, in the manufacture of *fruit* essences, which, with the exception of the essence of orange, are rarely, if ever, made from the fruits after which they are named. But the addition of formic ether to sulphuric ether has been suggested, on account of the great reduction of temperature which it causes, for inhalation in surgical operations, which, like ovariotomy, are apt to be followed by extensive inflammation.

Picric Acid, or carb-azotic, is formed by the action of nitric acid on salycin and its derivatives, on phloridzin, indigo, aloes, benzoin, silk, etc. It gives off yellow, suffocating vapors, is acid, and extremely bitter of taste. It is soluble in water, alcohol, and ether, and stains the skin permanently yellow. Its aqueous solution precipitates gelatine. Its salts are mostly yellow, and have a bitter taste. Potassium picrate dissolves in 260 parts of water. Given continuously to rabbits, it causes emaciation, diarrhœa, ecchymosis of the intestines, and yellowness of the conjunctiva and urine. *In large doses* it causes nausea, diarrhœa, and flatulence, with debility, and twitching of the cutaneous muscles. It partially dissolves the blood-disks, and in the white corpuscles the *nuclei* exhibit a lively molecular movement. In man it causes yellowness of the eyes, skin, and urine, and is supposed to illustrate the mode of production of jaundice in certain cases, as in yellow fever and acute yellow atrophy of the liver. It is a supposed remedy for *acholia*, or entire deficiency or suppression of the secretion of bile. Picric acid is trinitophenol, or a trinitophenic acid, and is now generally derived from phenol. Its intensely bitter taste gives it its common name, from pikros, bitter. If heated suddenly, it and its salts explode with violence. It stains animal tissues yellow, and is used by histologists; is largely used in dyeing, and is fraudulently added to beers to make them bitter. It is of value in toxicological analysis, as it antidotes and precipitates alkaloids from their solutions.

Oxalic Acid exists in combination with ammonia, in guano, with calcium in many plants, such as rhubarb, curcuma, ginger, squills, orris, valerian, quassia, and as acid potassium oxalate in phytolucca, belladonna, rumex, and oxalis, most lichens, and many vegetables. Some urinary calculi consist of oxalate of calcium. It is also found in the gall-bladder, in uterine mucus, and in urinary sediments. It is formed by the action of nitric acid on most organic compounds; even sugar, gum, and sawdust yield oxalates when heated with hydrate of potassa or sodium. It is generally made from sugar, molasses, or starch, with nitric acid; one hundred parts of sugar make fifty-eight to sixty of oxalic acid. The dark mother liquids left in the preparation of tartaric acid yield it. Treated with glycerine, it is decomposed into carbonic and formic acids. Acid potassium oxalates, called salts of sorrel or salts of lemon, will remove iron stains from paper, linen, and leather, but oxalic acid is generally used. Its taste is intensely sour. Large doses cause vomiting, with burning pain and constriction of the throat and stomach. The vomits are dark-colored, and may contain blood. When the pain is very severe, collapse may ensue, with drowsiness. Sometimes the symptoms are unaccountably long delayed. Some patients may live to the twenty-third day, but death may occur in from three to twenty minutes, or eight hours. Dark discoloration of the œsophagus, stomach, gelatiniform softening of the stomach, and even perforation of it may occur. The blood is said to be universally bright in color. *Antidotes:* Chalk in water, slaked lime, dried whitewash, etc. It is one of the most rapid and unerring of the common poisons, and hence has rarely been used in the treatment of disease. Still it can be as safely handled as arsenic, aconite, or atropine. It has been suggested in an induration of the stomach and sclerosis of other organs, especially of the brain and spine, in which it causes softening. It seems to have a specific action on the lumbar and dorsal spinal cord. In one case there was great weakness and numbness of the legs and back, so that the patient could scarcely stand, much less walk. In another case the first thing complained of was acute pain in the back, gradually extending down the thighs, occasioning ere long great torture. In a third case the patient complained more of the pain shooting down from the loins to the thighs and legs, than of the pain in the belly. In a fourth case there was numbness, tingling, and pricking in the back and thighs. In a fifth case, there was almost complete loss of power and motion in the legs, which did not pass off for fifteen days. It evidently must be suited to diseases of the spinal cord, opposite, or very different from those which it produces. The only preparations which are used are the oxalates of cerium and iron. The former sometimes controls vomiting, due to reflex irritation from pregnancy, nervous and uterine derangements. It is very insoluble, and hence often inert, and has been given in doses of from 1 to 8 grains three or four times a day. The oxalate of iron is also comparatively insoluble, and hence nearly inert.

Hydrobromate of Quinine consists of potassii bromidii. gr. 162; acid. tartaric., gr. 198; quiniæ sulph., gr. 60; aquæ, ℥ iij. Filter. Dose, 30 to 60 minims. For hypodermic injections and for intermittents with congestion of the brain or spleen.

Hydrobromic Acid has an agreeable, acidulous taste, and most of the physiological and therapeutical actions of the bromides, while it is far less apt to cause *acne*. It is also a corrigent to iron, and prevents the headache so often accompanying its full action and that of quinine. Added to a mixture of quinine and water, it will make a clear solution in the proportion of two minims to each grain of quinine. Added to aconite, it is one of the most soothing and efficacious remedies in fevers and inflammations attended with great nervousness, restlessness, even delirium. It is said not to be useful in epilepsy. Dose of the dilute acid, 30 to 60 minims, largely diluted in water.

Normal Valerianic Acid is a butylformic acid, obtained by the oxidation of normal amylic alcohol; it is an oily liquid, and has an odor resembling that of butyric acid. Ordinary valerianic acid is delphinic acid, discovered by Chevreul in 1817 in the oil of the porpoise (*Delphinum phocena*), and subsequently in the valerian and angelica roots. It is also formed during putrid fermentation or oxidation of albuminoid substances, and occurs in the urine and fæces in typhus fever, variola, and acute atrophy of the liver. It is an oily, colorless liquid, with a penetrating odor, like a mixture of valerian and old cheese, and sharp acrid taste. It dissolves in thirty parts of water, and in alcohol and ether in all pro-

portions. It is a little remarkable for dissolving phosphorus. It is found in the flowers of Anthemis nobilis, or chamomile, and wormwood, but is prepared almost exclusively by oxidizing amylic alcohol with bichromate of potash and sulphuric acid. Given with water it is less disagreeable, and leaves a sweet after-taste. Valerianic acid bears the same relation to amylic alcohol that acetic acid does to ordinary alcohol. Its neutral salts are inodorous when dry, and may be given in wafers. Apple-oil, from applejack, is amyl valerianate. It coagulates albumen, serum, milk, and is slightly irritating to the skin. Its odor is not imparted to urine and blood, but may be perceived in the peritoneal cavity, which renders it useful in some peritoneal diseases, especially false peritonitis. It quickens the heart's action and respiration, then produces debility. In rapid death from it the gastric mucous membrane is pale, hence it produces paralysis or collapse of it. Valerianic acid is not used alone in medicine, and its combinations are useless except the valerianate of ammonia. Angelica archangelica is rarely used in this country, but it is far more agreeable, and quite as efficacious. Valerian contains one or two per cent. of an essential oil, the dose of which is two to eight minims, and is said to reduce the reflex excitability, motility, and sensibility, and even to antagonize the tetanizing action of brucia. The chief use of valerian is in the treatment of nervousness, hysteria, and hysterical disorders generally. There is no doubt as to its great value in these cases. In epilepsy, chorea, and paralysis agitans valerianic acid is to be preferred. The elixir of the valerianate of ammonia is not nearly as useful as the tincture, solid or fluid extract, or the oil, or acid. It has not yet been used in combination with phosphorus or camphor.

Cancer Statistics in England.—At the Cancer Hospital, Brompton, 1,974 cases of true cancer were treated either as out-patients or in the wards. Of these 841 were cases of epithelial cancer, 438 occurring in males, 403 in females; 1,069 were registered as "scirrhus," 54 in males, 1,015 in females; 64 were registered as "soft or medullary cancer," 18 in males, 46 in females. Cases described as "osteoid" and "colloid" are not included in the above computation. The following statistical statements regarding the above cases of scirrhous and epithelial cancer have been prepared at the hospital: Average duration of disease previous to coming to hospital: scirrhus, 15.23 months; epithelial, 20.5 months. Had relations previously affected with cancer, 81. Average age when attacked: scirrhus, 48 years; epithelial, 51 years. Had been previously operated on: scirrhus, 138; epithelial, 102. Average lapse of time before disease returned: scirrhus, 21 months; epithelial, 20 months. Cases ascribed to blow or injury: scirrhus, 60; epithelial, 18.—*British Medical Journal.*

The Treatment of Dysentery with Corrosive Sublimate and Colocynth.—Dr. S. B. Childs, of Brooklyn, writes: "The methods ordinarily advocated for the treatment of dysentery being generally unsatisfactory, and for the reason, to my mind, of being irrational, I would fain bring before the medical profession a mode of treatment that at my hands has produced desirable results. Pathologically considered, we have in dysentery a localized inflammation, either catarrhal or fibrinous, of the mucous and submucous membrane of the lower intestinal tract. That one case may be wholly catarrhal, another case wholly fibrinous, or that the catarrhal may run into fibrinous, has been amply proven. With any of these conditions present the majority of medical writers still advocate sugar of lead, opium, etc., *ad nauseam.* Hardly a mixture is given that does not contain more or less opium. Now, paralyzing the contractility of the intestinal walls by this nervous sedative certainly does not cure. Castor-oil and Epsom salt have been recommended, but generally in too large doses, and then withal they invariably have as an adjunct some preparation of opium. Having an inflammation of a severe type, it would seem a *desideratum* to give some form of medicine that would produce an alterative action directly in the tissues involved, and yet at the same time not to excite any disturbing influence on the system at large. Now, we have in small doses of bichloride of mercury just what will answer this requirement. The griping pains and tenesmus that are so distressing in this complaint can be readily controlled by tincture of colocynth in minute doses. My mode of procedure is to give the mercury alternately with the colocynth, and on the pain being relieved to supersede the colocynth with the tincture of ipecac." Dr. Childs then gives notes of two cases illustrating the efficacy of his treatment. In the early acute stage he gave tincture colocynth in gtt. $\frac{1}{10}$ doses, alternating every half hour with corrosive sublimate, gr. $\frac{1}{100}$.

Musk.—Although musk has been long well known in the West, yet, says Dr. Macgowan in his report on the health of Wenchow ("Imperial Maritime Customs"), it seems worth while to translate what Chinese writers have to say about it. The musk-deer is found throughout the mountains of Yünnan, Szechwan, and Thibet; it is a timid little animal, and often dies of fright. It feeds on juniper-leaves and reptiles; snake-bones are found in its stomach. In spring its glandular pouch is greatly swollen and inflamed. The secretion is discharged with the urine. Musk-deer always resort to the same place for micturition, and cover their urine with earth. In such places deposits of a superior quality are found, amounting sometimes to fifteen catties (a catty is a Chinese weight of about one and one-third pound). The article which is most prized is that which falls from the musk-deer on to the ground, and is gathered in grains that are as precious as pearls. These deposits are so pungent that, if carried through a garden or woods, it prevents fructification. The poisonous effect of fresh musk on vegetation is shown also by the blighted appearance of places which the musk-deer selects for its convenience. For some distance around these places there is an absence of plants, and farther off the leaves exhibit a yellow tinge. This valuable substance no sooner leaves the hunter's hands than skilful manipulators adulterate the article for wholesale dealers, who further adulterate it for the trade, by which time it contains only about ten per cent. of genuine musk. Musk is said to be an anthelmintic, and to cure the bites of venomous serpents.—*Lancet.*

Mr. Lawson Tait on Pneumonotomy.—Mr. Lawson Tait has written to the *British Medical Journal* the following letter, which we believe most persons will agree is an eminently sensible view of the case: "Sir: I think the facts that the idea of the application of surgery to the diseases of the lungs occurred to Sir Spencer Wells forty years ago, and to others before him; that all of us engaged in the surgery of the abdomen must have, as I have often done, restlessly discussed the possibility of passing above the diaphragm; and yet that nothing has been done, form a sufficiently trenchant statement of the case. Nothing has been done beyond the drainage of old suppurating pleurisies, and possibly a few gangrenous vomicæ; and I do not think it is likely that we shall go much beyond this, in spite of Dr. Biondi's experiments. I have had several cases of thoracic disease sent to me, with the tempting request that I should attempt an operation; but I have never seen my way to the effort, they were all so clearly cases of malignant disease. I cannot imagine that any man in his senses would attempt to remove a human lung with a tumor in it. It would not be resection of parts of four ribs which would permit the removal of a tumor sufficiently large to admit of accurate diagnosis; and I cannot observe, in the literature just at the moment accessible, that any other kinds of tumors occur in the lung, save those of hydatid origin, and those of a cancerous nature. If the tumor were hydatid, the removal of the lung would be unnecessary. If the tumor proved to be an aneurism, the disaster would be awful.

For phthisis, I imagine removal of the lung would be a still more absurd proposal. If one lung were riddled with vomicæ, the chances of the other lung being affected would amount to certainty. If there were only one large cavity, not of tubercular origin, or very chronic in its history, drainage would suffice. The facility with which Dr. Biondi has removed lungs, and parts of lungs, from dogs, guinea-pigs, cats, fowls, pigeons, and sheep, and the absence of mortality from such operations, is likely to be a snare rather than a help. It does not need saying that the removal of a healthy lung, collapsed by the introduction of air into the pleura, would be a very easy matter, and very different from the removal of a diseased and adherent organ. There would be as much difference as there is between normal ovariotomy and removal of a pyosalpinx. It is perfectly clear that these animals, with their deep and narrow chests, differ very much from us, with our wide and shallow cavities, in their powers of enduring the accident of acute pneumothorax; certainly they would differ from us immensely in the facility with which pneumonotomy may be performed. Their chests are built for the endurance of the special efforts of great speed, and we have lost those physical characters; and I venture to say that, if acute pneumothorax were suddenly inflicted upon sixty-three healthy adult human beings, death would be the immediate result in the great majority of the experiments. The analogy between nephrectomy and pneumonotomy, of which Sir Spencer Wells makes use, is also a misleading one; for the functions of the kidney may be interfered with to a considerable extent, and even entirely for a considerable period, without apparent trouble; but we have no proof that this is probable in the case of the lung. The only experiment I ever saw in this direction, the result of an accident, resulted in immediate death. I do not think the severest critic can say of me that I have any tendency to obstruct surgical progress; but it seems to me that neither *à priori* reasoning, nor clinical experience, will lead us further than we have got in pulmonary surgery—drainage, with the useful addition of costal resection in old-standing empyema; and I am quite sure that we may regard Dr. Biondi's experiments as the outcome of the work of an enthusiast, misleading in their tendency, and dangerous for any practicable application which might be made of them.—I am, etc., LAWSON TAIT."

THE HISTORY OF THE DISCOVERY OF THE CIRCULATION, recapitulated, divides itself naturally into a series of epoch-making periods: 1. The structure and functions of the valves of the heart, Erasistratus, B.C. 304. 2. The arteries carry blood during life, not air, Galen, A.D. 165. 3. The pulmonary circulation, Servetus, 1553. 4. The systemic circulation, Cæsalpinus, 1593. 5. The pulmonic and systemic circulations, Harvey, 1628. 6. The capillaries, Malpighi, 1661.—*Dr. Henry C. Chapman.*

PERFORATING GUNSHOT WOUND OF THE STOMACH AND LIVER.—Dr. R. M. Stone, of Omaha, Neb., sends us the following: "I was called on May 20th, 1884, to see Mike P——, who 'was shot in the bowels.' I found a young man of twenty-four, hearty and vigorous in appearance, lying in a state of unconsciousness, with a bullet wound of entrance, badly powder-burned, beneath the margin of the left tenth rib and three inches from the median line, and a wound of exit over the right tenth rib. The patient's pulse was good, and though he was suffering from shock yet there was no evidence of collapse from serious internal hemorrhage. I had determined on my way out to the case to perform laparotomy if there was evidence of serious internal hemorrhage, but finding no evidence of such condition, and no definite evidence of perforation of the stomach, I determined to treat the case expectantly, but saw no reason to hope for favorable results. Dr. James Carter saw the case with me in the evening, and agreed with me in the very unfavorable prognosis. The patient died nineteen hours after receiving the wound, and at my request Dr. M. A. Robert made the autopsy. We found that the abdominal cavity was partially filled with bloody fluid, consisting largely of lemonade, which had escaped from the stomach. The ball, a 44-calibre, had wounded the omentum, entered the stomach along the greater curvature, emerged one-half an inch from its entrance, then entered the liver just above the gall-cyst, ploughed its way through two and a half inches of the liver, and then entered the right abdominal wall, fracturing the tenth rib and emerged over it. The autopsy demonstrated that a laparotomy could not have been useful, for, though the wounds of the stomach could easily have been sewed up, yet the lesion of the liver and the violent peritonitis that must have ensued, together with shock, would have proved fatal."

EXTRA-UTERINE PREGNANCY ENDING IN SUPPURATING CYST OF TEN YEARS' STANDING—PERITONITIS—AUTOPSY.—Dr. G. C. Park, of Murraysville, Pa., writes: "It may be of interest to the readers of THE MEDICAL RECORD to recite through the columns of your journal a brief history of the case of the wife of Dr. W. J. R——, of Newlonsbury, Pa. She became pregnant for the first time in December, 1873, and after a protracted labor of five days was delivered by instruments on September 14, 1874. She made a good recovery, being able to attend to her ordinary household duties, and only complained of slight pain below the umbilicus and to the left of the median line about April, 1875. She continued to perform the duties of a mother and housewife, though there was slight tumefaction near the sigmoid flexure of the colon; and in May or June of the same year (1875) she passed, by the bowels, a quantity of pus, estimated by her husband at from a pint to a quart. In 1878, she passed a quantity of hair by the bowels. In 1882 she passed a large quantity of pus with a roll of hair estimated at from three to four inches in length, and one line in thickness. On May 11, 1884, seven weeks after her eighth labor, one of which was a premature, and while dressing her hair, she was suddenly seized with a pain below, and to the left of the umbilicus, accompanied by chilly sensations, but no rigor. Symptoms of diffused peritonitis were soon manifest. On May 19th she died, aged thirty-four years and thirteen days. By her own request we were permitted to have an autopsy, which, with the assistance of Dr. Ewing, I conducted. On opening the abdominal cavity pus oozed out, which was preserved and estimated at a quart. The bowels were all glued together by recent adhesions. Pus extended from the bladder to the diaphragm. The left lung was adherent to the posterior thoracic wall. Attached to the sigmoid flexure of the colon was a tumor not much larger than an ordinary-sized hen's egg. This was divided and revealed three teeth, one very large and the shape of the canine of the adult. Coarse dark hair lined the sac containing the teeth. A mass weighing about a pound was found beneath the fœtal tumor, placental-like in consistency, ragged and highly vascular. The right ovary showed a small ovarian tumor and was itself hypertrophied. The strange features of the case are these: 1, her health was good during all this time; 2, the long time and no interference with pregnancy and delivery; 3, pus formed and escaped by the bowels without any premonitory symptoms. On May 11th the pus-sac broke, discharging the contents among the bowels, resulting in the death of the poor woman, over whose head the sword of Damocles had been suspended for near ten years."

RECTAL ETHERIZATION.—Dr. S. Baruch, of this city, writes: "Apropos of rectal etherization, I am glad you are giving prominence to the fact that it is dangerous. I was just on the eve of adopting it in an operation for trachelorrhaphy after hearing it highly commended by, and after seeing it act beautifully in the practice of, one of our best surgeons. On my next visit, however, I learned that a patient had died purely from the effect of rectal etherization, the whole intestinal canal having been found hemorrhagic."

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Original Articles.

ON HAY FEVER AND ROSE COLD.

BY MORELL MACKENZIE, M.D. LOND.,

CONSULTING PHYSICIAN TO THE HOSPITAL FOR DISEASES OF THE THROAT; LECTURER ON DISEASES OF THE THROAT AT THE LONDON HOSPITAL MEDICAL COLLEGE; LATE PHYSICIAN TO THE LONDON HOSPITAL.

IN a lecture on hay fever, delivered not long ago at the London Hospital Medical College (see *British Medical Journal*, May 7, 1884), the present writer alluded to the complaint as one unknown in the "good old times." Now, though, both in letter and spirit, this statement is perfectly correct, it too much ignores the fact that an individual idiosyncrasy rendering people sensitive to the influence of rose pollen was not very uncommon two hundred or three hundred years ago. As the term "rose cold" has survived in America, while it is quite unknown here, I think it probable that the complaint may be much more common on the other side of the Atlantic than it is in England; and it is with the view of eliciting some "modern instances" that I venture to bring under the notice of my fellow-workers in the New World some remarkable examples of rose catarrh as related by writers of the sixteenth and seventeenth centuries.

As early as the year 1565, Botallus[1] (known to fame as the discoverer of the *foramen ovale* in the heart) affirmed that he knew persons who held the smell of roses in deadly hatred, because it gave rise to headache, sneezing, and troublesome itching of the nose. Somewhat later, Van Helmont[2] (1577–1644) mentions the odor of sweet-smelling substances as causing headache, and in some cases difficulty of breathing; he also gives[3] the case of a canon who was *totâ æstate propemodum asthmaticus, totâque hyeme liber*. It must be allowed, however, that this passage, though suggestive, is not quite conclusive as to the nature of the malady. In 1673 I. N. Binningerus[4] says that he has often heard from James à Brun, a professor of the medical faculty in the University of Basle, that his wife, Ursula Falcisin (a lady, as he is careful to inform us, whose charms were of the "too, too solid" kind, *ampli corporis et carnosi*), suffered from coryza for several weeks every year during the rose season.

A few years later we find Ledelius[5] recounting the case of a merchant of Grünberg who could not smell a rose without immediately suffering from itching, followed by inflammation of the eyes, with profuse lachrymation and headache lasting some days. We come next to a case of especial interest, which was published in 1691 by I. Constant de Rebecque.[6] This passage is important as conveying the result of an experienced physician's observation of his own symptoms. He tells us that for thirteen years he had been afflicted with coryza during the rose season, which *per totum tempus quo rosæ se mihi offaciendas præbent durat eoque elapso sponte desinet.*

At first he attributed his sufferings to heat, but in the year 1685, when the summer was exceptionally hot and there were hardly any roses on account of caterpillars, he was struck by the fact that his annual disorder did not trouble him. The symptoms came on at once, however, after inadvertently plucking a rose toward the end of the season. He concludes that something flows from roses (*e rosis aliquid effluere*) which stings the nose (in his case exceptionally sensitive) and *aculeis quibusdam solutionem continui et si non sensibus obviam excitet.* This observer, therefore, came very near the mark as to the real cause of the disease, to which he applied the term *coryza a rosarum odore.*

An extraordinary case is related by Herlinus[1] (on the authority of Adrian Spigelius, whose name still survives in one of the lobes of the liver) of a Roman cardinal, Oliver Caraffa, who could not bear the smell of roses. This is confirmed from personal knowledge by another writer,[2] who adds that Caraffa was obliged every year to shut himself up during the rose season, guards being stationed at all the gates of the palace to stop any visitor who might be wearing or carrying the dreaded flower. It is, of course, possible that in this case the roses may have produced some other affection than rose fever, but as it is distinctly stated that it was the *smell* to which the cardinal objected, we may, I think, fairly conclude that the "sting of the flesh" which tormented him was, in fact, rose pollen.

About the end of the seventeenth century Riedlin relates the case of a merchant with whom he was acquainted who was afflicted with sneezing and catarrh every year when the roses were in bloom. Riedlin advised his patient to avoid the *cause* of his complaint, a point beyond which we have not even yet advanced.

Heberden's[3] observations make a kind of connecting link between the rose catarrh of the seventeenth century and the hay fever of the nineteenth, for though this physician does not seem to have been at all aware that the complaint had any connection with flowering plants, he mentions casually that five of his patients suffered from catarrh for a month every summer, while another was similarly affected during *the whole of that season.*

The author of this paper will feel greatly indebted to any American physician who may be able to bring under his notice any well-authenticated case of rose cold.

19 HARLEY STREET, LONDON, W.

A MATERNAL IMPRESSION.—Dr. F. W. Epery, of New Richmond, Wis., writes: "A lady in her second pregnancy was much affected and greatly annoyed by a deformed brother-in-law, who spent his whole time in the house and constantly complained about his *imaginary* ills—as he was a confirmed hypochondriac. His deformity consisted in a very pronounced posterior curvature in the upper dorsal and lower cervical vertebra, a long neck approaching the horizontal, with head deficient in occipital region. When the child was born it had precisely the same posterior curvature, and there was a complete arrest of development from the first cervical vertebra to the frontal bone. There was no brain, and the face resembled that of the deformed brother-in-law."

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[1] Commentarioli duo alter de medici, alter de ægroti munere, Lugduni, 1565, p. 23.
[2] Asthma et Tussis, cap. x. (Opera Omnia, Hafniæ, 1707, p. 344).
[3] Ibid., cap. xxiv. (Opera Omnia, p. 346).
[4] Obs. et curat. medicinal centuriæ quinque contur. secunda, obs. lxxxvi. Montbelgardi, 1673, p. 227.
[5] Miscell. Nat. Curios. Lipsiæ, Dec. ii., Ann. 2, Obs. 140, p. 309 (probably 1682).
[6] Atrium Medicinæ Helvetiorum, Obs. rar. et curat. insign., obs. 92, Geneva, 1691, p. 150 et seq.

[1] Henricus Herlinus: De Remediis sudoriferis et analepticis, page 32. Lipsiæ, 1693.
[2] Joh. Pierius. Hieroglyphica, lib. 8, cap. 25, page 96. Francofurti, 1678.
[3] Linea Medicæ, Augustæ Vindelicorum, 1695, p. 177.
[4] Commentarii de Morborum historiâ et curatione, Londini, 1809 cap. xxiv., De Destillatione, p. 118 et seq.

ON SOME DISORDERS OF NUTRITION RELATED WITH AFFECTIONS OF THE NERVOUS SYSTEM.

Being the Address in Medicine Delivered Before the British Medical Association at its Meeting in Belfast, Ireland, July 30, 1884.

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(Special for The Medical Record.)

(Continued from page 212.)

Muscular wasting coexistent with joint disease.—For some years I have been led to observe, in a certain group of cases of chronic rheumatic arthritis, the coexistence with the joint-lesion, always well marked, of affections of muscles. These have been not merely weakness of extensors, and tonic contraction of flexors, the two factors which largely determine the character of the deformities of the disease, but marked and excessive wasting of muscles, closely resembling those of progressive muscular atrophy. Together with these, I have noted the existence of fibrillar tremors, and of electrical reactions like those of progressive muscular atrophy in the general, but with some indications of less loss of galvanic than of faradic sensibility, with some slight indication of the reaction of degeneration.

In addition to those, I have noticed, as others before me have noticed, a wasting of the tissues other than the muscles of limbs.

These concern, in the hands, loss of substance in the soft parts of the digits, the wasting of the skin, which brings about a satiny or glossy quality of the surface, and a dwindling of the nails, which we see carried to the full in extreme true gouty affection of the fingers, where the nails become small scaly appendages of the carrot-likedigits.

In some cases I have also observed exaggeration of the so-called tendon-reflexes, and in some fibrillar tremors. In fact, as they present themselves to me, these are cases of progressive dystrophy of joints marching with progressive atrophy of muscles, and with atrophy of the other tissues of limbs. My friend, Dr. Hadden, who has taken great interest in these cases, has recently presented a paper to the Clinical Society of London, taking up some of the points here mentioned. I may here relate two cases which bear upon this relation.

M. K——, a married woman, aged sixty, was recently under my care. There was no history of gout or rheumatism in her parents, but she had one sister, who was said to suffer from gout. She presented the lesions of rheumatic arthritis in the hands, knees, and ankles, but the hands were most affected. The muscles of both arms were distinctly wasted; the skin of the ends of the fingers was glossy, and the soft tissues around the two last phalanges were much wasted. The right hand was affected more than the left. The tendon-reflexes were greatly exaggerated, both at wrist and elbow, particularly on the right side. The hands showed the adduction deformity of chronic rheumatic arthritis rather than the claw of progressive muscular atrophy. The electrical reaction, of both kinds, was lessened; she had, therefore, slowly progressing in company, arthritis, wasting of muscles, wasting of tissues generally, and wasting of skin, without the reaction of degeneration. I could, in her case, detect no reflex cause. She was anæmic, but not thin, and had worked hard. The case certainly pointed to a common central nervous origin of all the dystrophies. A case now under care is more interesting.

The patient, a man, following the occupation of salesman, and not the victim of overwork, has been ill for ten or twelve years. He suffered from rickets in childhood; there is no record of acute rheumatism in his own life or of any joint-affection in his ancestry. When first ill, he had occasional attacks of weakness in his limbs, accompanied by swelling in the ankles, knees, wrists, and fingers, never in the shoulders or elbows. These attacks came and went, leaving him, at first, well in the intervals, but for some years he had not been possessed of proper muscular power. Two years ago he was violently shaken by a thunderstorm, since which the symptoms of which he now complains have appeared. He has, now, typical rheumatoid arthritis of the hands and feet; the right shoulder is stiff and painful on movement, particularly in abduction; there is grating; and a rim can be felt around the articular end of the humerus. The elbow is not involved, but the wrist is greatly distorted, almost to dislocation. There is wasting of the interossei of the hand, of the thumb-muscles, of the muscles of the forearm, and in an excessive degree of the right deltoid; the right biceps being also, but not so profoundly, wasted. There is no paresis, only such loss of motor power as would correspond to loss of muscular substance. Marked fibrillar twitchings can be seen in the arms, being more active in the right. The feet show chronic arthritis without any notable wasting of muscles. The knees are slightly affected, the hips free. There is no loss of sensation anywhere, and no impairment of the functions of bladder or of the rectum. The deep reflexes are rather diminished, the superficial not affected. The electrical reactions of the muscles chiefly affected are impaired. The right deltoid is much less sensitive to the galvanic current than it should be, and responds only to a faradic stimulation stronger than that which should normally excite it. The biceps give the same reactions in a lesser degree. The other muscles have normal reactions. In this case there is no history of gout, of lead-poisoning, or of causes likely to give rise to spinal trouble. These dystrophies of muscle and nerve are not accompanied by dystrophies of skin. The joint-affection was, to all appearance, preceded by a distinct accession of muscular debility.

Articular dystrophie brought about by irritation of spinal cord.—If the considerations upon which I have been dwelling indicate the probability that some such influence as is excited by the spinal cord in producing muscular atrophy may produce also articular dystrophy, there are others which bring into stronger relief the influence of the spinal cord in bringing about directly affections of joints independently of muscles. I cull from my note-book a typical case of the kind. A lady, of healthy family and healthy personal antecedents, went, soon after her marriage, to an evening party. For the reception of a large number of guests, a tent was provided. Rain fell heavily all the evening, and saturated the canvas. For certain reasons she did not dance, but sat in the tent for some hours, with her back to the wet walls, experiencing, although not actually in contact with the moisture, a sense of intense chill in the back. Within a day or two arthritis set in in both knees. It was not intense, but presently gave rise to much swelling and deformity. The ankles, hips, elbows, hands, and shoulders were in succession attacked with the same trouble. All the joints were excessively swollen, tender, and painful; but the muscles were not noticeably affected. The joint affection was one of steady progression, not one of paroxysmal exacerbations, followed by increased mischief, and ended by rendering her practically helpless as regarded locomotion, simply by reason of pain. Her muscles retained a fair bulk and strength; the reflexes were exaggerated, but it is necessary to remark that the great sensitiveness of the joints prevented a proper investigation on this point. The electrical reactions were not, I am sorry to say, tested. Her mind remained singularly clear and well balanced; her bodily functions were not affected; she became the mother of several children; and, in spite of locomotive difficulties, manifested an exceptional power in the direction and discipline of her household. All the effects of the long chill received by the spinal cord seemed to fall upon the joints alone, producing, in a typical form, a progressive rheumatic (to use the accepted term) arthritis. After reading M. Charcot's cases, one might be tempted to wonder why such painful

affection of joints should not have been followed by atrophy of muscles. But, as a matter of observation, I think it will generally be found that the influences which give rise to violent reflex reactions are themselves mostly of the lighter kind. Those which are superficial, call out rapid and widespread reaction, as, for instance, an irritating particle in the nose; those which are deep and intense, call out the more concentrated reactions which end in an inflammation, or are proclaimed by severe pain. This is but a parenthesis, but it relates to a point in reflection of irritation which is worthy of deep thought.

Observations of Senator and others on the nervous production of arthritis.—I might illustrate this point more fully from my records of cases, and should do so, were it not that the spinal cord origin of certain kinds of chronic arthritis has been already contended for by other observers. Senator, in his all too short paper on Arthritis Deformans in "Ziemssen's Cyclopædia," speaks thus: "Existing observations seem to point exclusively to the peripheral variety of the disease, as connected with the affections of the nervous system." Remak and Benedikt were probably the first to regard articular affections as a result of irritative states of the spinal marrow and sympathetic. Indeed, Remak went so far as to call arthritis deformans by a new name, "arthritis myelitica" and "myelitico-neurotica."

The date of the publications in which these views were advanced, is as far back as 1863 and 1864. Senator, in his comments on them, after mentioning a case published by Kohts in 1873, in which this disease followed a fright, proceeds to say, "The usually symmetrical order of its invasion (the invasion of arthritis deformans), can hardly be explained, unless we assume the existence of some central causes situated in the nervous system. The disease is often associated with neuralgic and tropho-neurotic symptoms. Finally, some results of treatment, particularly those recorded by Remak and others concerning the effects of electricity directed to the central nervous system, serve likewise to support this view."

That it should be regarded by Senator as difficult to explain the symmetrical order of invasion, except upon the assumption of a central nervous irritation, illustrates in a forcible way the extinction of the beliefs of one generation by the beliefs of its successor. Sir James Paget's "Lectures on Surgical Pathology" are not many years old,—they were published in 1853.

In this most fascinating book, written by a man whom I may fairly call the most accomplished, as, indeed, also the most eloquent man in our profession, we find set forth, in the most convincing way, the argument "that all symmetrical diseases depend on some morbid material in the blood," and that certain blood diseases have "seats of election." The reasoning upon which this is based is found later in the book, where, on pages 24 *et seq.*, Sir James proceeds to develop a principle, the germ of which is in the writings of Treviranus. The sentence of Treviranus is, "that each single part of the body, in respect of its nutrition, stands to the whole body in the relation of an excreted substance." According to the ideas which follow, every part of the body has its special nutritional and excretory endowments, inasmuch as it differs from all other parts, however identical in superficial seeming, in its reaction to alterations of the blood When there is symmetry on either side of the vertical plane, the corresponding parts agree in their reactions, while differing from all others. The second chapter—on the conditions necessary to healthy nutrition—contains a most interesting sketch of the influence of the nervous system on nutrition; but the main ideas of causation are independent of nervous influence, and rest on relations between the blood and the tissues.

The idea of some such special endowment cannot be spoken of without more than respect.

It is held still, in respect of cutaneous diseases, and in respect of gout, and particularly of goutiness. I maintain that it must still be accepted as a truth, but as only a part of the truth, as regards nutrition, and I enter my protest against the short-sightedness which fails to recognize now what Sir James Paget did, in his well-balanced judgment, recognize thirty years ago, the possibility of the combined action of two dissimilar processes.

To resume now the line of thought which has been arrested by this excursion, let us, for a moment, review our position. We have considered possible causation of dystrophies of muscle by irritation of joints, of dystrophies of joints by injuries of bones, of dystrophies of joints by a sort of subjective irritation coming through channels of centripetal muscular nerves, of dystrophies of joints and muscles by irritation or disease of nervous centres.

Digitorum nodi.—Are these all the channels by which nervous influence may affect the nutrition of joints? I think not. For more than fifteen years the probability that the form of chronic rheumatic arthritis, called by Heberden, "digitorum nodi," by Haygarth, "nodosity of the joints;" by Senator and others the polyarticular (I am not responsible for the hybridity of the term)—the polyarticular form of arthritis deformans, is in many cases a dystrophy, determined by nervous irritation propagated from the uterus to the spinal cord, and reflected upon the joints, has presented itself to me. Let me give briefly the notes of a case which I saw first in the year 1868.

The subject was an unmarried lady, twenty-six years of age. She came to me complaining of terrible dysmenorrhœa, and of what she had been taught to call rheumatic gout. She was thin, anæmic, sallow of complexion, had abundant acne on the face, and was hysterical, having given up society and all active occupation for the contemplation of her ailments. There was no small justification for this absorption. Out of every month of her life she had only one week of ease. The menstrual period lasted one week, and was attended with excessive pain in the pelvis and back. A week before its commencement the smaller joints of the extremities became swollen and excessively painful. They remained in this condition till the end of the week following the cessation of the menstrual period. There were some variations in the severity of the dysmenorrhœa, and there were corresponding variations in the intensity of the joint-affection. During the week of ease the joints showed a little deformity, but were freely movable, and free from pain or tenderness. The "rheumatic gout" was the main object of her attention, from its long persistence; and at first I adopted the idea, already adopted by others, that the two troubles were the effect of a common cause, a rheumatic inflammation affecting joints and pelvic organs at one time. Treatment instituted upon this hypothesis failed, had long failed to give any relief, and what may be called the central position of the menstrual trouble, led me to the opinion that it was the primary mischief giving rise, in some way that was then not very clear to me, to arthritis.

The uterine conditions were now steadily attacked. At the end of a twelvemonth's treatment, the dysmenorrhœa was subdued. As it yielded, the joint-trouble dwindled; and, with its cessation, the rheumatic paroxysms disappeared. So did the acne, the unhealthy complexion, and the general ill-health. At the present time, this lady is stout, healthy, and vigorous of mind and of body; but the joints retain some painless deformity. In the year 1869, I published an account of this case, and of others which appeared to me to indicate that uterine irritation, chiefly associated with hyperæmia of the organ, were capable of reflection upon the joints, with the result of inducing a form of rheumatic arthritis. The paper is probably little known to you, and you will pardon me if I present to you some of its matter and conclusions.

Haygarth, writing in the year 1805, on the "Clinical History of the Nodosity of Joints," stated that he had seen thirty-three cases of that condition, all in women. He regarded the affection as peculiar to women, and as

belonging to the climacteric and subsequent periods of their life. Only three out of his thirty-three cases had the "nodes" during the period of regular menstruation. Of these, two appeared to be between thirty and forty years of age; the third had suffered twelve abortions. In all, the fingers were chiefly affected. Haygarth separated this affection as "nodosity of joints" from "rheumatic gout"—a term already in use when he wrote; and he considered it to be chiefly a disease of the middle and higher classes. Curiously enough, when I analyzed my note-book, I found records of just the same number of cases—not of nodosity of joints simply, but of rheumatic arthritis, combined with decided symptoms of uterine disorder or irritation. I excluded from the list cases in which there was evidence of uratic deposits, and cases in which no known uterine complication existed, though both classes demanded separate attention, as forming chapters of the history of arthritis.

Of the thirty-three, twenty-six belonged to the middle and upper classes, mostly to the former, the remaining seven to the poorer classes; seventeen were unmarried, thirteen were married, and three were widows.

As regards age, ten were between twenty and thirty years; eleven were between thirty and forty; nine were between forty and fifty; and three were between fifty and sixty.

The indications of ovario-uterine complication in the several cases comprehended marked irregularity of catamenia in two; catamenial flow simply in excess, one; catamenial flow very scanty in one; catamenia irregular with excess in two; catamenia recently disappeared in four; catamenia recently reappeared after apparent cessation, the reappearance coinciding with arthritic attack, in two; dysmenorrhœa with excess in eight; dysmenorrhœa, with deficiency in four; constitutional symptoms of climacteric present in two; fibroid of the uterus with menorrhagia, but not dysmenorrhœa, in one; catamenia regular, relieving pain present at other times in sacral region, in one; catamenia excessive, with leucorrhœa, in one; profuse leucorrhœa in woman married several years without pregnancy, one; woman married several years without pregnancy, one; case in which arthritis occurred on two occasions a week before parturition, these being the only pregnancies, one; climacteric long past, arthritis began then, and has since continued, one.

In four of the above cases, ovaritis existed; and it is important to notice, first, that amenorrhœa is not noted in any case, second, that the conditions noted are mainly such as would involve hyperæmia of the internal genital organs; third, that marked dysmenorrhœa is noted in twelve or more than a third of the total number.

The seat of arthritis was various. It affected the hands alone in thirteen cases; the hands, wrists, and elbows in three; the upper extremities in one; the right hand only in one; the right hand and wrist in one; the hands and feet in one; the hands, feet, and knees in one; the knees and ankles in one; both extremities in six; both extremities on one side in one; the ankle and tendo Achillis in one. From this, it appeared that the hands were more often affected than any other parts, the metacarpo-phalangeal joints being of all joints the most obnoxious to this form of arthritis. The hands, besides being alone attacked in the cases, shared the affection with other joints, and principally with other joints of the upper extremity, the wrists excepted, in all the rest of the cases, except two. In three of the cases, where the affection was limited to one side of the body, or having begun, continued excessive, on one side, there were ovarian pain and tenderness on the same side, and a distinct frequency of neuralgia on the same side.

An inspection of the cases brought out further most interesting relations. Not only did the arthritis coincide with ovario-uterine affection; but, in a considerable proportion of cases, paroxysms of arthritis coincided with menstrual periods. This sort of parallel march was noted in fourteen cases, in one of which arthritis preceded menstruation as its regular herald; in seven, arthritis regularly accompanied; in two, it followed; in two, it both accompanied and followed; and in two, arthritis occurring in the intervals was relieved by menstruation.

Now, if these had been so many cases of dysmenorrhœa, the occurrence might perhaps have been accepted as an argument for believing the dysmenorrhœa token to be a part of a general rheumatic process. But, though the conjunction was reported in seven, it was conspicuously absent in as many cases; and these are precisely the instances which do most to prove that the arthritis is a product of the uterine hyperæmia. With this simple question, we will deal for a moment, leaving the *modus operandi* to be discussed later on.

Among the seven cases referred to as not accompanied by dysmenorrhœa was that of a lady then fifty-two years of age. She had had a large family—in all twelve—and it was then as much as five years since she first began to suffer from arthritis. Before the arthritis troubled her, she had begun to experience excessive menstrual loss. She consulted for this a distinguished gynæcologist, who found the uterus enormously engorged, but otherwise free from disease. The engorgement was lessened by treatment, but not by any means cured, and the menorrhagia went on. The arthritis first came in the form of sharp inflammation and swelling of the knuckles of both hands, rendering them completely useless. It began usually on the second or third day of the menstrual flow, and continued as long after its cessation. The periods becoming more frequent and lasting longer as time went on, she became reduced to a very pitiable state. She was anæmic, exceedingly feeble, was crippled in hands, wrists, and knees, and lost her rest by reason of what she called "fidgets," uneasy but indefinable sensations in her limbs and abdomen, unaccompanied by pain or spasm.

Change of air and of scene, baths, tonics, alteratives, were all used in addition to local remedies, but no relief was obtained till, as she reached the age of fifty years, the periods began to be less frequent.

At length, intervals of two or three months occurred, and allowed her to gain strength, when she lost her arthritis and her fidgets, and appeared perfectly healthy. Of late, the periods had been still further apart; but still, whenever the catamenia appeared, she was once more crippled.

The association of the arthritis with this painless menorrhagia began clearly at a time when the patient was weakened and drained of blood. The fidgets illustrated the irritability of the spinal cord related with imperfect nutrition, and the arthritis came out as a resultant of two conditions—uterine irritation and spinal sensitiveness.

I may add that I have seen this lady within the last few weeks, not as a patient; that the catamenia have entirely ceased for three years; that she has had no joint-trouble since, excepting on one occasion, when it occurred in conjunction with severe intestinal catarrh; and that she is now ruddy, well nourished, active, and cheerful.

A lady, aged fifty-one, the mother of six children, came to me in 1882 with a gouty-looking inflammation in the elbows, wrists, hands, and knees. This had occurred a day after the return of the catamenia, previously absent for twelve months. She had no signs of gout in the shape of deposits, and her own expression was, that she felt the attack to be really "in the nerves." The period was short, and the arthritis disappeared. But the catamenia having since returned with unusual freedom and duration on two occasions, she had each time had the arthritis severely enough to cripple her. The arthritis came on at the end of the periods, the last of which was accompanied by abdominal pain, a circumstance hitherto unknown to her. I am now able to report of this case that the catamenia have ceased, and that the joint-affection is forgotten.

I might multiply my citation to a large extent, for the relation is illustrated constantly now that it has once been recognized.

Hypothesis of reflex causation of arthritis by uterine irritation.—The argument which was founded upon these cases and others not now quoted, had the following general bearing: that, seeing this frequent coexistence of a certain kind of inflammation of the joints with uterine hyperæmia, seeing also that the joint-inflammation increased in intensity in a very marked proportion to increase of the uterine hyperæmia, and that, also, when the signs of uterine hyperæmia ceased the joint-affection passed away, there was reason to regard the one as caused by the other. The joint-affection had in itself no necessary property of permanency. The uterine affection had of a necessity a beginning and an end, and the joint-affection was noticed only during its existence. If, from such considerations, it was fair to infer that the dystrophy of joints was, in some way, brought about by an abnormal condition of the uterus, the intermediate conditions linking the two had next to be sought for. That there was some intimate relation between inflammation of the joints and uterine conditions more or less approaching inflammation, had not escaped the acute observation of the late Dr. Todd. In his Croonian lectures for the year 1843, he had written: "It is remarkable how frequently this affection" (the symmetrical nodosities of the hands, called by him "chronic rheumatism of joints") "occurs in women, and how rarely in men; and there are many facts which indicate that, in the former, it may have an uterine origin, either connected with the puerperal state, or from a defective or difficult catamenial action." He was inclined to believe that "the unhealthy secretions of the uterus affords material for the production of rheumatic matter." In these lectures he quotes Sir Henry Holland, Sir Charles Locock, and Dr. Rigby as authorities in favor of the opinion that there is some connection between the sexual functions and the causes and course of gout and rheumatism.

Another good observer, Dr. Fuller, had spoken decidedly as to the fact, that "rheumatic gout attacks women rather than men." "It fixes," he had said, "upon the girl just arriving at puberty, whose menstrual functions are ill performed, and it occurs frequently at the cessation of menstruation or during the debility which follows on a miscarriage, or a difficult or protracted labor, more generally when complicated by flooding." These authors found the explanation of the relation which they so closely acknowledged in the suggestion of a virus, generated in the uterus, absorbed by the blood, and attacking, in virtue of some elective affinity, the joints.

If we consider the many cases in which acute rheumatism occurs immediately after parturition, in the early weeks of lactation, we may acknowledge that the sequence of morbid phenomena lends much support to a hypothesis of this kind. We must acknowledge that the condition of the uterus after parturition provides a large quantity of septic, inflammatory, and quasi-inflammatory matters; that its vascular arrangements are such as to offer a ready access of these matters to the circulation; and that where these matters are undoubtedly septic and where they find access to the circulation, in the septicæmia or pyæmia which follows, the joints are among the organs most frequently invaded by the poison so introduced into the system. But in this, as in other forms, the joints are by no means the only subjects of attack. The viscera are, at least with equal frequency, the seat of this secondary affection. In the acute rheumatism associated with the conditions just mentioned, the serous membranes, and the lungs, and the veins, are frequent sufferers from the inflammation which primarily attacks the joints; but they are more rarely affected without intercurrence of a joint-affection, although, in pyæmia, it is certainly not rare to find the joints spared, while the viscera show fatal lesions. In the nodosity of the joints, which I have presented to you as simultaneous with, and in its variations parallel with, uterine hyperæmia, there is, so far as I have been able to make out, no corresponding visceral inflammation of either an acute or chronic kind. If a blood-condition, having some quality of attenuated septicity, were the agent, the viscera ought in fairness to share in the injury. We may remember that the presence of lactic acid in the blood has been adduced in explanation of the phenomena of acute rheumatism, and, perhaps, more particularly of acute rheumatism breaking out during lactation. This very neat hypothesis has been supported by names of great authority, and rests on the observations that the administrations of lactic acid to men and animals is followed by joint-affection, and that lactic acid has been found in the blood during acute rheumatism. The whole theory resting on these somewhat slender bases cannot, I think, apply in any way to the joint-affections considered in the early part of this address, where the only obvious lines of causation were nervous.

There are not a few considerations which induce me to oppose to this humoral and chemical view the view of nerve-agency. Putting aside those peculiarities of personal constitution which render certain persons prone, under many circumstances involving febrility, to develop joint-affection, particularly acute rheumatism, I would represent that at least a very large majority of the women having nodosity of the joints, or arthritis deformans, present in the first place a marked hyperæmia of the os and cervix uteri. That these organs have the power, through centripetal nervous influence, of producing enormous excitement in the spinal cord is the next point which may be taken. Sometimes the excitement may show itself by pains in the limbs, sometimes by flushings of the skin, sometimes by swellings of the breasts. Sometimes, as it appears to me, the effects of excitement may be reflected along the same paths, which in primary affection of the spinal cord have led to affections of joints. Moreover, the state of the patients under consideration is generally one of debility, often one of anæmia. It is a matter of daily experience that in such conditions the reflex excitability of the spinal cord is increased; it explodes, so to speak, on the application of impulses which, in its proper nutrition, it would transmit. And so both the local and the general state would conduce to the reflection.

Gonorrhœal rheumatism.—There is yet another form of arthritis in which it appears to me possible to call in the agency of the nervous system. I speak of gonorrhœal rheumatism, so called. In this disease, as we know, an arthritis having no differences in its local morbid anatomy from the lesions already discussed comes on during an attack of gonorrhœa, often in company with ophthalmia or sclerotitis. When the gonorrhœa ceases the joint usually gets well. The arthritis is easily induced afresh by new attacks of gonorrhœa. There are, however, some variations in progress and relation. The arthritis sometimes coincides with, sometimes alternates with, the gonorrhœal flow. It sometimes persists, particularly in the knees and ankles, producing chronic changes leading to "white swelling," or a kind of anchylosis. The affection is only seen in males. Ricord gave it the name of "blennorrhagic arthritis," which is to my mind a far better term than gonorrhœal rheumatism. As regards its diagnosis, he asserted that the only real difference between this form of arthritis and all the others is to be found in the cause which gives rise to it. Brodie, Elliotson, Fuller, and others, have cited cases in which a simple, that is to say, not gonorrhœal, urethritis has had associated with it the same three disorders—arthritis, conjunctivitis, sclerotitis. It is hard, of course, to prove a negative, but we have the evidence of the above-named excellent observers, that they at least accepted, in these cases, the absence of gonorrhœal taint as a fact.

I have seen lately a gentleman suffering from a third attack of the kind. He is gouty, lives temperately, but works very hard. On three occasions he has had severe purulent urethritis, which he asserts, to be absolutely un-

connected with any possible source of gonorrhœal kind. This is followed by sharp arthritis, and sometimes by gouty inflammation of the toe, lasting until the discharge, which is very obstinate in resisting treatment, is checked. The patient is a man of the world, and I believe his statement. His own belief is that all the phenomena are gouty.

Blennorrhagic arthritis has naturally been attributed to some specific infection of the system from the urethra, and consequent infection of the joints; but if the concurrence of a similar arthritis with non-specific urethritis be admitted, the theory of a specific poisoning is considerably weakened. If it be acknowledged, again, that so-called gonorrhœal rheumatism is a disease only seen in men, the difficulty of accepting the specific idea is increased.

Women certainly do suffer from gonorrhœa, and I can conceive no reason why, if they have it, they should not be poisoned by it in the same way as men are. The more I think over the matter, the more do I see to suggest a parallel between the nodosity of the joints in women, so often associated with irritation of the uterine surfaces, and the blennorrhagic arthritis associated in men with inflammation of the urethral surface, particularly if the prostatic part of the urethra be affected. That excitements of the prostatic part of the urethra, particularly of the floor, have enormous influence upon the spinal cord, is shown by the phenomena of sexual intercourse. The widespread indescribable sensations which attend emission, and the exhaustion which follows, testify to this. Most of us have, no doubt, been consulted by men, chaste in act, who are tormented by sexual excitement. They tell one stories of long continued local excitement, followed by intense muscular weariness, or by some severe aching pain in the back and legs. In some, I have had complaint of swelling and stiffness in the legs, and of pains in the joints, particularly in the knees. Conditions of this kind indicate an effect upon the spinal cord which is very nearly reacting in trophic influence upon the limbs. I may relate a case in which it seems to me that an actual trophic influence was exerted.

A gentleman, thirty years of age, who had lost his wife about two years before, came to me with painful affection of the knees. Both knee-joints were greatly distended with fluid and were tender, but not much heated. The condition reminded one of the "arthropathie des ataxiques;" but no other sign of tabes dorsalis could be detected then or since. I tried various remedies without success, and he went to many doctors and many baths, without obtaining a cure; though at last with some relief. Then he married again. Not long after he came to tell me that he was quite well. He also told me, upon my asking him as to his bachelor life, that he had been almost constantly harassed by the thorn in the flesh, but that he had been absolutely chaste, and he himself was of opinion that marriage had been the means of cure. I hear of late (some seven years after the second marriage) that his joints are getting bad again, and at the same time that his wife suffers from a uterine affection almost altogether preventing cohabitation. Upon such grounds as the foregoing considerations afford, I suggest it is possible that irritation of nerve-cells in the spinal cord, carried to them through channels of urethral nerves, may set up an excitement in those cells giving rise to irritative processes in the joints supplied by them. M. Charcot's cases already referred to indicate rather a process of inhibition than anything else; of torpor, as he says, of the nerve-cells under centripetal stimulating coming from joints.

Urinary paraplegia.—In relation with the idea that irritation is set up in joints by irritation reflected from viscera, I am tempted to point to the so-called reflex or urinary paraplegia as illustrating, possibly, a torpor set up in the nerve-cells of the cord instead of an irritation dependent on centripetal irritation coming from viscera. The name reflex paraplegia, given by Brown-Séquard, has been of late replaced by a safer term—urinary paraplegia. But, whichever name we use, we recognize that an urethral irritation, most commonly dependent on a stricture, is so joined with paralysis or paresis of the lower limbs as to make it probable that the stricture is a cause of which the paraplegia is an effect. The objection—a just one—to the application of the term "reflex" lies in the fact that the paralysis can sometimes be traced to myelitis in the lower part of the cord, sometimes to neuritis. But in a certain number of cases no lesion of cord or nerves has been detected, and to such cases, where the paraplegia and the urethral irritation were the only coexistences, the term reflex might be applied. I do not speak here of other reflex paraplegias. I merely wish to indicate the possibility of some such nerve-relations existing between the urethral surface of man and the joints, between the uterine surface of woman and the joints, carried on by the mediation of the nerves and cord, and to compare them with such relation as we have been treating of as probably existing between the joints and muscles through the cord.

Enough, you will say, of the joints and their neurotic dystrophies. Too little, I reply, for time forbids me to discuss the neurotic dystrophies of gout.

Neurotic dystrophies of secretion.—I am compelled to go on to another subject, and to direct your attention to some neurotic dystrophies of secretion. Some of the most striking of these are certainly hard to be understood. So far as I am aware, it is not known why the breath of a man, who has undergone great and concentrated mental anxiety, should suddenly become fetid; or why the milk of a woman, whose emotions of fear or anger have been violently excited, should prove poisonous to the infant at her breast.

Glycosuria in relation to nerve-influence.—Suggestions, illustrating the mode in which such dystrophies come about may not unreasonably be afforded from a consideration of what is known with regard to the production of glycosuria. Not long ago I reviewed my notes of cases of glycosuria unattended by diuresis; such cases occurring almost entirely in persons over fifty years of age. Since the time of Bernard's great discovery a long series of experimental physiologists has been engaged in working out the influence of the higher centres, and of the sympathetic in producing glycosuria. Pathological investigation has brought many good observers to the belief that true diabetes mellitus is caused by disease of the central nervous system. It must be admitted that this point is still far from settled. In the non-diabetic glycosuria of comparatively old people, we may see a dystrophy coexistent with disorders of various kinds—disorders, for the most part, more pressing than itself—in such relation that we may be justified in reducing it to the rank of a symptom. If it can be regarded as a symptom, we may have a reasonable probability of arriving at a notion of its causation by an examination of its coincidences or its coexistences. As regards the onset of true diabetes, the frequent antecedence of great emotional disturbance of the central nervous system has been recognized by general consent. Dr. Dickenson has collected a large number of illustrations of this connection in his work on "Diseases of the Kidneys." In the cases which I have analyzed, one-third of the whole number told a story of excessive or prolonged mental work or anxiety preceding the recognition of glycosuria.

In one, after much emotional excitement, insanity was at last fully declared. In one, after a long course of strenuous mental labor, scarcely intermitted during the nights of many years, hemiplegia occurred, and apoplexy ended the chapter. The last two of these cases lead on to another group, in which glycosuria appeared as a symptom of actual disease of the nervous system.

In two cases there was marked tabes dorsalis, and in a third locomotor ataxy was present, with additional signs indicating affection of the whole breadth of the spinal cord. Decided hypochondriasis was noted in two

cases. One of the patients was haunted by the dread of syphilitic disease, but manifested no signs thereof whatever. In a third group marked signs of nervous disorder accompanied the glycosuria, to wit, tinnitus, vertigo, sleeplessness in an extreme degree, constant headache, loss of power, of thought, and memory, numbness in limbs, sciatica, shingles, prurigo, and marked loss of muscular energy. In three cases the patients were the subjects of a very typical form of angina pectoris. I may add that I have since seen another illustration of this coexistence. To sum up, there was scarcely a case in which glycosuria was not associated either with evident disease of the central nervous system, or with symptoms indicating great perturbation of the centres of the nerves. A second stage of observation brings out a new set of relations. In more than a third of the cases true gout was distinctly present; in a much smaller number chronic rheumatoid arthritis. A third of the patients admitted habitual over-indulgence in alcoholic stimulants.

The multiform relations of glycosuria here exhibited would lead to the inference that the ultimate causes are of many kinds. We may recognize the excess of sugar in the blood giving rise to glycosuria as having at least a sixfold origin. Putting aside causes consisting in disproportion between the amount of saccharine matter introduced into the system, and the capacity of the liver for transforming it, or in varying stability of glycogen, or in diminished use of sugar by the system, we come to the discussion of the increased decomposition of glycogen determined by increased afflux of diastatic ferment. To put this in other words, we come to the consideration of dilatation of the hepatic artery and its branches allowing of an increased inflow of ferment-containing blood. By such kind of intermediate influence it is probable that irritations and irritability of the nervous system can be conceived to set up the glycosuria. Irritation of the hepatic nerves in alcoholism and diseases of the liver, irritation of the pneumogastric in the stomach or in the heart, irritations of the pneumogastric arising in other peripheric stimulation can conceivably be reflected in a pathological way, as they are known to be in a physiological way; and in the most typical of the cases which I have analyzed I have had presented to me as causative of glycosuria at the same time signs of deep gastric or hepatic disorder, and signs of general nervous irritability.

Gout and glycosuria.—Gout and glycosuria have been seen in tolerably frequent association in my cases. Dr. Gairdner pointed this out many years ago. Dr. Lauder Brunton has used the term gouty glycosuria. I am tempted, after much thinking, to ask whether the expression "gout of the liver" may not be appropriate; to ask whether we may not entertain the idea that, in many people, there may exist a more or less constant arterial hyperæmia of the liver, comparable to the acute hyperæmia of joints, undoubtedly an essential factor of acute gout.

Acute inflammation of diabetes and nerve-influence.—In true diabetes the occurrence of sudden and very acute visceral inflammations is common. It is generally found that, while such complications last, the urinary sugar dwindles, or even disappears. An explanation of this occurrence has been found by some writers in the hypothesis of an increased combustion of sugar as a part of the pyrexial state. But, seeing that such inflammations involve the diversion of a large quantity of blood to the organ affected, I venture to suggest that in such diversion, rather than in a purely hypothetical combustion, may be found the true explanation. Physiological experiment has shown that, when sections of the sympathetic leading to vaso-motor dilatation of the hepatic vessels alone has been made, glycosuria has been produced; that, when the section has been made at a point producing, in addition to dilatation of the arteries of the liver, dilatation of the vessels of the intestines, glycosuria has not followed. The inference drawn is to the effect that so much arterial relaxation was produced in the supply of organs neighboring to the liver as to stand in the way of an effective increase in its arterial circulation. I had an opportunity quite recently of testing the probability of this hypothesis. The temperature of a diabetic patient rose suddenly to 104° Fahr. The most careful examination brought out no signs of visceral inflammation during two days, and in the same period the amount of sugar in the urine stood at the figure registered for several weeks before. On the third day, the temperature remaining at the same height, the signs of pneumonia became apparent, and at the same time the urinary sugar diminished very considerably. In my gouty cases a similar train of phenomena has been several times noted—the sugar diminishing in a very marked degree at the time of the development of acute joint-inflammation, and returning immediately on its subsidence.

In trying to understand the sudden acquirement of a poisonous quality by the milk of an agitated woman, one had found a difficulty of this kind—could mere quantitative variations in the afflux of blood affect the quality of the secretion? Can it be possible that, in the production of the lacteal secretion, may be concerned not merely increased afflux of the materials of the secretion, but also varying afflux of ferments determining its quality, and capable, by reason of either great deficiency or great excess, of seriously perverting its quality? Here is an admitted neurotic dystrophy, the mechanism of which is well worth careful investigation; and from the consideration of glycosuria we may be enabled to glean at least suggestions as to what the mechanism may be.

The nervous relations of myxœdema.—Let me, leaving many points which are tempting, go on to say a few words about another class of neurotic dystrophies, namely, about those occurring in myxœdema, occurring therein to such an extent as to constitute the predominant symptomatology of that disease. We may recognize in myxœdema three principal lines of nervous abnormity.

First, intellectual, consisting in slowness of thought, in slowness of volition, in loss of memory, in irritability of temper, in unwarranted suspicions, in delusions, in actual insanity, or in torpor growing to coma.

Second, in sensation. General sensation undergoes a change, to which the term bradyæsthesia is applicable; the recognition of impressions made on the surface is distinctly retarded; the sensibility to sensations of heat or cold is blunted; and there are often noted abnormal subjective sensations, particularly affecting the sense of taste and smell.

Third, the motor powers are disturbed in a singular way; all motion is slow; co-ordination is imperfectly adjusted; certain groups of muscles become unduly relaxed, and are stimulated to action only by strong exercise of volition. Reflex actions are produced with considerable delay. In some cases evidences of more localized nervous impairment occur, in particular the signs of bulbar paralysis. It may be argued, on the one hand, that this remarkable assemblage of nervous disorders points to the nervous system as the seat of the original cause of the disease; on the other, that the obvious changes in the state of the connective tissues throughout the body may affect the nervous centres and put their morbid reactions into the category of secondary conditions. It is a question, that is to say, whether myxœdema be a neurotic dystrophy, or whether the disorders of the nervous system are produced by an alteration of connective tissues, having an origin, like that for instance of lardaceous disease, independent of nervous influence—chemical, degenerative, inflammatory, or other. The remarkable atrophy of the thyroid body observed in this disease, and the relation which is by many regarded as existing between that body and the sympathetic system, have brought some thinkers to the belief that the disease arises primarily neither in affections of the cerebro-spinal system, nor in altered nutrition of the connective tissues. Those who are induced to take this view

have found the explanation in primary alteration of the sympathetic system; in alteration of the sympathetic system somehow determined by the atrophy of the thyroid, or in alteration of the sympathetic system determined by chronic apyretic inflammations within the chest, particularly in the pleura. What can be said is, that in this disease there can be recognized an enormous dystrophy of connective tissues; that the dystrophy has certain aspects of degeneration; that, again, in the increase of nuclei, it has some aspect of over-activity; and that, so far, it may suggest the occurrence of a low form of inflammatory process inducing degeneration of the tissues involved; or that, on the other hand, a degeneration has induced a very elementary inflammatory process in the tissues.

The atrophy of the thyroid may conceivably be brought about by the changes of the connective tissue which we can see in the other parts of the body, leading, by the aggressive hypertrophy of that tissue, to pressure on, and atrophic changes in, immeshed glandular tissues. But here we must hold our hand, for there is another side to the question. Kocher and others in Switzerland have of late years been cutting out enlarged thyroid glands, and have recorded the sequence upon this operation of slow development of a condition which, as produced and described by them, corresponds exactly with myxœdema as observed in England. The interest of the observation is intensified by the circumstance that these operators in making this record were not aware of the observations on myxœdema, made in this country.

The true function of the thyroid body being undetermined, one may hope that the concurrent observations may converge in such a way as to throw light on a very obscure bit of physiology; but it is hard to resist the conclusion that, through some nervous channels, the thyroid body influences the nutrition of the connective tissues generally, and may, perhaps, also influence the nutrition of the cerebro-spinal centres.

To put the matter in another way, the great tendency of existing observations is to class myxœdema among neurotic dystrophies.

I should have liked, if I could have brought them within the compass of this address, to have said something about the neurotic dystrophies of the skin, but must, however, reluctantly leave them untouched.

Many here will think that I should have said something about the dystrophies incited by surgical injuries of nerves. These last, indeed, offer possibilities of more exact treatment than any of the dystrophies which have engaged our attention. The observations of Weir Mitchell, Brown-Séquard, Hutchinson, and others have been, in some unconscious fashion, directing my thoughts to the choice of the subject of to-day's address. Let me acknowledge this fully; and let me ask you to understand that I have to-day merely been putting before you the result of observation and thought set going by the reading of the works of predecessors and contemporaries. Each succeeding generation in science gathers the lines of older and recent vision into some focus more or less of its own choosing. The wisdom of the choice is to be judged by the generations still succeeding. What shall be the outcome here?

A Rare Human Tapeworm.—Dr. Leidy describes in *The American Journal of the Medical Sciences* for July, 1884, the tænia flavopunctata, a rare human tapeworm, which has now been observed for a second time, both cases occurring in this country and infesting children. It is not improbable that the species is more common than the observations would warrant us in believing, for from the smallness of the worm and the generally prevailing ignorance of the distinctions in the more common species, it might readily be passed for immature portions of these.

CEREBRAL LOCALIZATION—THE CENTRES FOR VISION.

By PHILIP ZENNER, A.M., M.D.,

CINCINNATI, O.

(Continued from page 149.) †

Physiological data.—Fritsch and Hitzig, in 1870, first made known to the world that irritation or removal of certain parts of the cerebral cortex was followed by definite motor phenomena, or the disturbance of the cerebral functions. Their experiments made it highly probable that different parts of the cortex have different and distinct functions. Their results were soon corroborated and extended by Ferrier, and since then there have been numerous contributions of the same kind.

Experiments of Munk.—It is not my object to enter into any historical disquisition, but rather to give those experimental researches which bear directly on our subject. I shall, therefore, begin immediately with the experiments of Munk, which, from the precision and completeness of their results, have excited universal admiration. We will consider them only so far as they are concerned with the sense of vision.

Munk's experiments were made upon dogs and monkeys, chiefly the former. The conclusions drawn from them were: 1, in the dog the visual centre is in the occipital region, the visual area of each hemisphere being in relation with both eyes, though to a much greater extent with the eye on the opposite side than with the one on the same side; 2, in the monkey the visual centre is in the occipital lobe, one hemisphere being in relation with one-half of each retina.

Munk reported his results at various meetings of the Physiological Society of Berlin, in the years 1877–80. Each successive report contains the additional knowledge gained from his latest experiments, and becomes especially interesting on account of the manner in which former statements are amplified or corrected. There is something in the gradual development of his views which apparently adds to their weight, and the more easily convinces us of their correctness. In order to give a better idea of these admirable experiments, I will give a brief summary of his reports:[1]

He began by removing small circular segments, fifteen millimetres in diameter and about two millimetres in depth from the convexity of the brain (of dogs) in various localities. Only when the part removed was in a limited area of the occipital region was there any appreciable impairment of vision. When the lesion was produced in this region it was followed by peculiar disturbances of sight. The affection of vision was observed only in the eye opposite to the injured hemisphere. When the sound eye was covered, so that he could only use the affected one; or, in case a symmetrical lesion had been produced in both hemispheres when both eyes were uncovered, it was observed that the animal no longer recognized objects formerly familiar to him. Thus, he remained unconcerned and quiet when a whip was held before him, at the sight of which he had previously been accustomed to wince or run away. A bright light brought suddenly before the eyes caused no movement, and he remained impassive in the presence of food until, through some other sense—taste, smell—he became cognizant of its presence. Yet the dog was not blind, for he avoided any obstacle in his way. At the end of from four to six weeks this visual defect gradually disappeared, and objects were recognized as before.

Munk supposed that the removal of this area in the cortex did not produce blindness, but that it robbed the brain of that part wherein were stored the visual images gained from past experience, leaving the animals, therefore, like new-born, who see, but do not know the meaning of what they see. The fact that after the lapse of a few weeks they again recognized objects he attributed

[1] Taken from Functionen des Grossheinrinde, Gesammelte Mittheilungen.

to knowledge gained from new experience. This condition, in which animals, while retaining the sense of vision, had lost the knowledge that vision usually conveys, he termed "soul-blindness" (*seelen blindheit*).

Later and more careful observations revealed that there was in these instances not only this mental blindness, but, at least for parts of the retinæ, complete blindness. It was observed after the soul-blindness had disappeared that when pieces of meat were scattered on the floor, the dog would find some pieces and overlook others. In brief, in those animals in which the specified part of the cortex had been removed there was absolute blindness of the central (the most important) part of the retina of the opposite eye, while the peripheral portions of the same retina remained intact. The size of the blind spot in the retina was in proportion to the extent of visual area destroyed.

Munk now removed what he supposed to be the entire visual area of one hemisphere, the cortex of the whole occipital region. At first the animal made the same impressions as those above described, in the one eye vision being apparently normal, in the other the so-called soul-blindness. But that this conclusion was not quite correct was shown by closer observations. When the sound eye was covered objects held in front of the other were apparently not seen. But if now the object was placed just before the covered eye, so that its image fell on the temporal side of the retina of the affected eye it then seemed to be observed. Vision was retained in its temporal segment while the rest of the retina was paralyzed. But there was for this still sensitive portion the condition described as soul-blindness—objects were seen but not recognized. But the animal could very readily be taught to again recognize the forgotten objects. Thus, when food was placed where its image fell on the sensitive portion of the retina it was at first left untouched. But when the animal learned what it was from his other senses, he soon recognized it by sight alone. A light held in the same position left the animal unmoved, but after he had been singed with it, its mere appearance produced manifestations of fear.

While after entire removal of the visual area of one hemisphere there was thus partial blindness in the opposite eye (the larger part of the retina being paralyzed, a smaller part on temporal side remaining sensitive to light), a contrary condition was found in the eye of the same side. Here central vision was perfect; but on careful examination it was observed that there was a small segment of the retina on the nasal side, corresponding in size to the sensitive portion of the other retina, where light was no longer perceived.

In seven dogs Munk succeeded in removing the entire visual area of both sides. They all lived several months (one of them six months) after the operation. In all of them, while the other senses and power of movement remained unimpaired, the sense of vision was lost in both eyes completely and permanently.

„There could scarcely be a more complete demonstration of the cortical centres for vision than these admirable experiments of Munk. It only remains to point out more precisely the relations of the retina to the visual area. This Munk succeeded in doing with a wonderful degree of precision. His results are as follows: The outer part of the visual area (about one-third of entire visual area) is in relation with the outer or temporal part of retina (about one-fourth entire retina) of the same side. The larger inner and median part of the visual area is in relation with the larger inner and central part of the retina of the opposite side. The outer segment of the visual area is in relation with the corresponding outer segment of the retina in such a way that the inner part of the former is in relation to the inner part of the latter, the outer part in relation to the outer part of the latter. The same relationship exists between the other corresponding segments, that is, the outer part of the inner and median segment of the visual area is in relation with the outer part of the corresponding inner and central segment of the retina, and, again, the inner part of the one in relation to the inner part of the other. To complete this topographical relationship, it need only be added that the anterior parts of the visual area are in relation with the superior, the posterior in relation with the inferior portions of the retina.

Lest the above may not be altogether clear, I will repeat the description of relationship of cortex and retina in Munk's own words: "Each retina in its outer lateral part is devoted to the most external lateral portion of the visual area of the same side. The much larger remaining part of each retina belongs to the much larger remaining portion of the opposite visual area, and in such a way that we may imagine the retina projected upon the visual area with the lateral border of this larger segment of the retina corresponding to the lateral border of the larger segment of the visual area, its most internal border to the median border of the latter, and, finally, the superior border of the retina to the anterior, the inferior to the posterior border of the visual area."

The results of Munk's experiments on monkeys have already been mentioned. They were made on a smaller number of animals, and lead to the general conclusion that the visual area is seated in the occipital convolutions, each occipital lobe being in relation with a corresponding half of each retina. We thus see that in the monkey the occipital lobe is in relation with a larger segment of the retina on the same side than in the dog, and in this respect is similar to what we will have occasion to observe in man.

These, then, very briefly given, are the results of Munk's experiments on dogs and monkeys. Ganser[1] observed, after removal of the occipital region in cats, blindness on the corresponding side of both retinæ. The results obtained by other experimenters, especially Ferrier, will be mentioned at a later period; but we must now proceed to examine the experiments of an eminent physiologist, Goltz, who has apparently obtained results contradictory to those just mentioned, and who has succeeded in exciting much doubt as to the correctness of the present theories of localization.

Experiments of Goltz.—Goltz has made various reports of his experiments, but of his original contributions only one, that published in the first volume of the "Transactions" of the last International Medical Congress, is at my disposal. The statements here made are taken chiefly from that article. A few of his experiments mentioned by Wernicke,[2] not included in the above report, will be added. Goltz' general conclusions are: Destruction of a large part of the cerebral cortex weakens all its higher functions, it diminishes the intelligence and thereby the acuity of all the special senses. But the destruction of no part is followed by the complete or permanent loss of any cerebral function, with slight modifications all being always alike affected, the degree depending only on the extent of the injury. In other words, we cannot say of any part that it is the centre for vision, hearing, the innervation of certain groups of muscles, or the like.

The experiments were made on dogs. In the beginning he was accustomed to remove portions of the brain substance by means of a stream of water, large parts being washed out at one time. He observed, after thus removing a large part of one hemisphere, hemiplegia on the opposite side, and blindness in the opposite eye. But these symptoms were only transitory. Soon the animal appeared to use one side as well as the other; and the eye again saw, though certain disturbances remained. Although he avoided obstacles in his way, he no longer recognized persons, was not frightened when threatened with a whip, etc.; in short, the condition above described as soul-blindness. Goltz at the same time observed similar defects of the other special senses. The dog ap-

[1] Archiv f. Psychiatrie, Bd. xiii., 1882.
[2] Gehirnkrankheiten. Introduction to vol. ii.

parently retained the sense of hearing, but was not frightened at the cracking of a whip as before, etc. Inasmuch as the symptoms were much alike, whatever part of the brain was washed out, Goltz believed that the present theories of localization must be incorrect. But for the purpose of examining the question more carefully, he instituted another series of experiments, wherein, instead of removing brain substance by means of a stream of water, he employed a boring-machine, wherewith he was enabled to remove much more circumscribed parts.

His general conclusions are the same here as from the former series of experiments. From small lesions he observed no permanent injury of intelligence or special senses, from large lesions (and such were produced in most instances) the general results already mentioned. In confirmation of his views he exhibited before the International Congress in London a dog in whom he had removed, at five different periods, from November 15, 1880, to May 25, 1881, large portions from the parietal and occipital regions of both hemispheres. This dog could run along in a lively manner, revealing no evidence of paralysis of any muscles further than a certain awkwardness in some of his movements. He was not blind, as evinced by his avoiding obstacles. But he manifested no fear when threatened with the fist or whip, or when a flame was brought in front of his eyes. He could hear, for he turned his head when called and tried to reach the caller. But he heard unmoved the cracking of a whip, which formerly produced the liveliest manifestations of fear. He could smell, but did not object to tobacco smoke or chloroform vapor. He could taste, but would eat the flesh of a dog, formerly very objectionable to him. Finally, his cutaneous sensibility was retained, though blunted. The dog's intellect was greatly impaired, and Goltz attributed the various sensory disturbances just detailed to the great lack of intelligence.

It is on experiments and observations of this kind that Goltz bases his views. Yet, when properly considered, they by no means have the full significance he attaches to them.[1] My present remarks refer to his conclusions only on the subject of vision. As to the motor phenomena in these instances, they must be explained in quite a different manner.[2]

According to the experiments of Munk, the extirpation of parts of the visual area is attended by permanent defects of vision, which defects are only detected after very careful observations. That Goltz made special examinations for the purpose of discovering whether such defects were present, whether there were larger or smaller blind spots in the retinæ, does not appear from his report. If but a small part of the visual area remained, that would probably be accompanied by sufficient vision to avoid obstacles, etc., which appeared to be the only evidence of sight in Goltz' animals, when large parts of the brain were removed. Only in case he had removed the entire visual area of Munk without producing complete blindness could it be said that Munk's statements had been disproven. It is true, Goltz claims to have done this. But we may be allowed to doubt this statement (at least so far as Munk's description of the visual area is concerned), for he speaks of the entire removal of the visual area of the dog presented at the International Congress, though a large part of it still remains.

But what Goltz dwells upon specially, as seeming to disprove former theories of localization, is that in his experiments the removal of the so-called visual centre caused equal defects in the other special senses, hearing, smell, etc. As an objection to the correctness of such reasoning it must be mentioned that in such instances large parts of the brain had been removed. Thus not only were parts of the surface removed, which presumably belonged to other centres, but the deeper portions of the brain were extensively injured, and thus fibres severed passing to various portions of the cortex. That such lesions should be followed by the impairment of more than one function is not surprising, but what ought to have been expected.

But apart from these considerations Goltz' experiments in some instances are opposed to his own views. The following illustrations are taken from Wernicke's summary of Goltz' experiments.[1] A dog, in whom the cortex of one occipital region was removed, five weeks after the operation saw only imperfectly with the opposite eye, while no other defect was noticeable. In another instance, where portions were removed from both hemispheres, vision was very imperfect while hearing was apparently normal.

The last instance I shall mention is the dog presented at the International Congress. This case is the more worthy of careful study because not only was it publicly demonstrated, but the post-mortem examination was made by a commission of impartial judges, giving it the value not alone of individual but also of general observation.

I believe in this case there is evidence of paralysis of parts of the retinæ. The dog did not fix objects with his eyes, as is usual in looking at things; when called and attempting to find the one calling him, he moved aimlessly about; and in moving about he often struck against objects on the left side, which seemed to indicate blindness in the left part of the field of vision, and may be brought in direct relationship with the fact made evident both by the written description of the post-mortem, and by the accompanying plates, that the visual area in the right hemisphere was removed to a much greater extent than that in the left.

We have dwelt sufficiently on the experiments of Goltz. If, notwithstanding the eminence of the experimenter, we cannot accept his views, we are influenced not alone by the results gained by other experimenters, but also by the critical study of his own results.

Topography of cerebral convolutions.—Before leaving this part of our subject I must enter briefly into a few anatomical details. The object of our present investigations is to arrive at a knowledge of the functions of parts of the convexity of the brain. We have thus far considered mainly the results of experiments on animals, and will have next to study pathological changes in man. But in order that there may be a comparison between such results we must know that the parts are anatomically homologous, in order to attribute to them like functions, but in appearance this is not the case. It will have been observed that in reference to rabbits, cats, and dogs, I have spoken of the occipital region, and in man and monkey of the occipital lobes and convolutions. For the latter can be distinctly mapped out in man and the monkey, but not in the other animals mentioned.

In most of the higher mammalia there are to be seen in the convexity of each hemisphere four longitudinal convolutions which pass from the anterior to the posterior part of the brain, arching over the Sylvian fissure. These are usually termed the four original convolutions, the one bordering the longitudinal fissure the first, that bordering the Sylvian fissure the fourth convolution. In lower mammalia, as the rabbit, there are only indistinct sulci on the surface of the hemispheres, and no convolutions distinctly mapped out. In the monkey and man, on the other hand, this four convolution type appears to have been wiped out through the appearance of new features, especially the fissure of Rolando, and the occipital fissures, thereby multiplying the number of convolutions.

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[1] This statement and the following ones are based upon the knowledge of Goltz' experiments and conclusions as found in the report to the International Congress. As in this report he reviews the whole subject, we are perhaps justified in judging it as it stands. If there be anything in his other contributions which apparently nullifies any statement of mine, I regret that such are not within my reach.

[2] Ferrier's explanation is probably a correct one, that the lower the animal the greater the independence of the subcortical centres; so that in dogs locomotion is still possible after removal of the cortical centres of motion, while in the monkey and man, where the hemispheres have a far higher influence, such mutilation will cause permanent paralysis.

[1] Loc. cit.

Nevertheless a careful study of their development, and of brains of different races, where the type gradually changes to these more extreme forms, enables us to trace a topographical relationship between the more highly developed convolutions of the monkey and man, and the four convolution type of other mammalia. It thus appears that the occipital convolutions are the posterior extremities of the second and third original convolutions; and the angular gyrus (a part we will have occasion to refer to again) is a part of the original third convolution.[1]

I may mention here that our future investigations will lead to the conclusion that the cortical visual area in man is mainly in the occipital lobes, the part corresponding to that pointed out by Munk as the visual area in the dog, and probably also to that in the rabbit as mapped out by Monakow.

AGE OF GREATEST RISK FROM CONSUMPTION.

By HENRY B. BAKER, M.D.,

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On page 36 of THE RECORD for July 12, 1884, I am glad to find an article, illustrated by a diagram, showing the death-rate from consumption at several periods of age from twenty to over seventy years. Some years since I prepared and published in a volume distributed in Michigan ("The Vital Statistics of Michigan, 1870"), issued in 1872, a similar diagram relating to the deaths returned as having occurred from consumption in the State of Michigan in the year 1870, 1,451 deaths in all, in which the increased proportion of deaths to inhabitants over the age of fifty-five years was especially noticeable. The subject is one which may justly claim the attention of the physician as well as the student of vital statistics. The death-rate of females was much greater than that of the males at ages from ten to fifty-five years, except that at the period from forty to forty-five years of age the death-rate of women from consumption dropped very noticeably; but at ages fifty-five to seventy-five years the death-rate of males was greater than that of females, from this disease. The number of deaths of those above the age of seventy-five years is too small to give a steady curve, but the table, and especially the diagram, shows well the death-rate of each sex from birth to the age of seventy-five years. The death-rate from consumption was then shown to be least at the ages from five to fifteen years. The remarks then made in connection with the subject, show the reason for the fallacy in the popular view that the death-rate is greatest at ages twenty to twenty-five or twenty to forty; the *number* of deaths being greatest at ages twenty to twenty-five, the fact of the much greater proportion of inhabitants at those ages than at the older ages is not generally held in mind.

THE RELATION BETWEEN NERVOUS AFFECTIONS AND DISEASES OF THE NOSE.—Dr. Chiari relates three cases of nervous affections caused by swelling of the mucous membrane covering the inferior turbinated bones. In two of these cases there was supraorbital neuralgia, which was entirely relieved after the removal of a number of nasal polypi. The third patient suffered from bronchial asthma. Although there seemed to be sufficient cause for the trouble in an aneurism of the aorta, nevertheless the author determined to reduce a slight swelling of the mucous membrane covering the anterior portion of the turbinated bones. This was done by means of the galvano-cautery, and the result was a perfect cure of the asthma. Dr. Chiari holds that one ought to search the nostrils for a possible cause of asthma in every instance, even though the condition of the heart or lungs would seem to offer a sufficient explanation of the dyspnœa.—*Deutsche Medicinal-Zeitung*, June 9, 1884.

[1] Wernicke: Gehirnkrankheiten, vol. i.

Progress of Medical Science.

PERSISTENT OMPHALO-MESENTERIC REMAINS.—The pouch-like formation of intestine occasionally seen projecting from the lower portion of the ileum, is universally known as Meckel's diverticulum. Not that this distinguished anatomist was its discoverer, but to him we owe not only the almost universal acceptance of his theory of the origin of the pouch in question, but are also indebted to him for calling conspicuous attention to its importance in the causation of serious disease. In an article in the July number of *The American Journal of the Medical Sciences*, Dr. Fitz, of Boston, considers this whole subject and points out that the view—that most, if not all well-authenticated instances of duplication of the intestinal tract, at any part of its course, are the probable result of the persistence and growth of the remains of the vitelline duct—is rendered highly probable from what is known concerning the development of the intestine. Attention is also called to cystic dilatation of the diverticulum. These retention cysts, as they are called, may have their cavity continuous or discontinuous with the intestine. Moreover, such cysts of possible intestinal origin are not limited to the abdominal cavity, having been observed in the vicinity of the œsophagus, in the abdominal walls, in the vicinity of the umbilicus.

Dr. Fitz points out that the vitelline duct is composed not only of layers of tissue equivalent to those forming the coats of the intestine, but it is also accompanied by blood-vessels. The relation of these omphalo-mesenteric vessels or their remains to intestinal strangulation is fully discussed, and the importance of bearing in mind the congenital nature of certain of the causes of acute intestinal obstruction is earnestly insisted upon. Dr. Fitz finds that—1. Bands and cords as a cause of acute intestinal obstruction are second in importance to intussusception alone. 2. Their seat, structure, and relation are such as frequently admit their origin from obliterated or patent omphalo-mesenteric vessels, either alone or in connection with Meckel's diverticulum, and oppose their origin from peritonitis. 3. Recorded cases of intestinal strangulation from Meckel's diverticulum, in most instances, at least, belong in the above series. 4. In the region where these congenital causes are most frequently met with an occasional cause of intestinal strangulation, viz., the vermiform appendage, is also found. 5. It would seem, therefore, that in the operation of abdominal section for the relief of acute intestinal obstruction not due to intussusception, and in the absence of local symptoms calling for the preferable exploration of other parts of the abdominal cavity, the lower right quadrant should be selected as the seat of the incision.

The vicinity of the navel and the lower three feet of the ilium should then receive the earliest attention. If a band is discovered, it is most likely to be a persistent vitelline duct—*i.e.*, Meckel's diverticulum, or an omphalo-mesenteric vessel either patent or obliterated, or both these structures in continuity. The section of the band may thus necessitate opening the intestinal canal or a blood-vessel of large size. Each of these alternatives is to be guarded against, and the removal of the entire band is to be sought for, lest subsequent adherence prove a fresh source of strangulation.

ON OPENING AND DRAINAGE OF ABSCESS CAVITIES IN THE BRAIN.—Drs. Fenger and Lee, in a paper on this subject in the July number of *The American Journal of the Medical Sciences*, consider the treatment of traumatic cerebral abscess, and report a case which was successfully treated by opening and drainage.

Bergman, in discussing the treatment of cerebral abscess, unhesitatingly sets it down as an axiom that wherever there is an accumulation of pus, trephining is most clearly and indubitably indicated, for the opening of an abscess in the brain is as necessary as in any

other part of the body, and we would add even more so. A correct diagnosis of abscess having been made, the further difficulty presents itself of locating it with sufficient accuracy, so as to be able to find it. A number of cases are on record, in which a correct diagnosis had been made, the trephine also put on more or less at the right place, but the knife or trocar being passed into the brain, nevertheless missed the abscess. Drs. Fenger and Lee show by their case that this difficulty can be obviated by multiple exploratory aspirations, performed at interstices sufficiently small to prevent any abscess from escaping detection, even if the trephine opening should not have been made at the point of the skull nearest the abscess.

There are on record a large number of cases of cerebral abscess in which trephining was performed, pus evacuated, and temporary relief obtained; but later relapse followed, and a fatal termination ensued. It is possible, judging from the success the practice has met with in the treatment of abscesses in other situations, that drainage of the cerebral abscess-cavity, with or without washing out, would have saved some of these cases, by preventing the reaccumulation of pus and the continuous infection of the surrounding brain tissue, the acute œdema of which is well known to be, as a rule, the final cause of death. As far as Drs. Fenger and Lee are aware, draining and washing out of cerebral abscess-cavities has heretofore not been tried; that it can be effected and without any detriment to the patient, is shown by their case, the treatment of which they hold strictly conforms to the rational methods of modern surgery in treating abscesses in general; and because of this, and not because their patient recovered, they regard the case as answering affirmatively the question: Is it probable that abscesses in the brain can be treated advantageously on the same principles as abscesses in other parts of the body?

Aspiration of the Bladder.—Dr. Hamaide relates some instances of impervious stricture of the urethra in which he aspirated the bladder from thirteen to eighteen times without observing any unpleasant symptoms. He cites these cases as an additional evidence of the safety of this procedure, and he maintains that aspiration is much less likely to do harm than is catheterization in unskilful hands.—*Journal de Médecine de Paris*, No. 21, 1884.

Traumatic Cephalhydrocele.—The occurrence of subfascial accumulation of cerebro-spinal fluid, in connection with and consequent upon simple fracture of the vault, is of great rarity. Two cases of this kind are recorded by Dr. P. S. Conner, of Cincinnati, in the July number of *The American Journal of the Medical Sciences*. So far as he has been able to ascertain, there have been reported but nineteen similar cases, and three others where there had been originally a communicating wound of the scalp which had closed. As far as has yet been observed, excluding those cases which were primarily compound, this traumatic cephalhydrocele is met with only in young subjects. Explanation of this fact is probably to be found, at least in part, in the great elasticity of the skull in infancy and early childhood, permitting of marked depression and fissuring of the vault without that associated wound of the scalp which would be likely to occur were ossification complete; and in part, also, in the much closer connection of the meninges and skull in children than in youth and adults. The decided gravity of these cases is apparent from the statistics. Of the eighteen cases of simple fracture in which the result is known, nine (fifty per cent.) died—eight of meningo-encephalitis and one of erysipelas and meningitis; and of the three in which the fracture was originally compound, one died (thirty-three and one-third per cent.) of cerebral abscess. Even the supposed recoveries may be regarded with some suspicion, because of too early report. Dr. Conner draws the following general conclusions: 1. Simple fracture of the vault of the skull may give rise to a collection under the scalp of the cerebro-spinal fluid; coming, it may be, only from an opened ventricular cavity. 2. Such traumatic cephalhydrocele may be developed quickly, or only after the lapse of a number of days, or even weeks. 3. The condition is one that has thus far been noticed only in young subjects. 4. The accident is quite likely to prove fatal from lepto-meningitis or meningo-encephalitis. 5. Operative interference should be restricted to the removal by aspiration of a limited amount of fluid; and such aspiration should be made only when severe pressure symptoms have manifested themselves. 6. A similar fluid accumulation may occur after closure of the external wound of a compound vault-fracture or of a trephining.

Purification of Drinking-Water.—The following method, proposed by Professor Almen, of Upsala, is recommended by Husemann: To a quart of water are added a drachm of a 5 per cent. solution of chloride of iron, and from 1½ to 2 ounces of lime-water. The ensuing reddish-brown precipitate removes all the floating particles and from 40 to 80 per cent. of the soluble organic matters. When this precipitate has settled to the bottom, the water is filtered through sand or fine linen. —*Deutsche Medicinal-Zeitung*, June 5, 1884.

The Etiology of Convulsions in Children.—There is a special predisposition in children to convulsions, and this is due, according to Professor Kjellberg, not to any increased irritability in the motor or sensory tracts or in the reflex centres, but to the fact that the brain is unable to exercise any controlling influence upon the reflex centres. Convulsions which occur at the commencement or during the course of any acute disease through direct central irritation are symptomatic. Those which are excited reflexly by irritation of the sensory nerve-endings are sympathetic. Symptomatic convulsions are due in part to disturbances in the circulation and in part to changes in the blood. Among the disturbances in the circulation, the most common is a rapidly produced cerebral anæmia. This may be caused by hemorrhage, a rapid waste of the animal fluids, or arterial spasm. In other cases it is due to cerebral compression or anatomical changes in the brain, such as extravasation of blood, tumors, softening, etc. Hyperæmia may also cause convulsions indirectly. When an excess of blood is carried to the brain the cerebro-spinal fluid in the perivascular spaces cannot yield, but makes pressure on the smaller capillaries, whereby they are emptied of their blood, and the real condition is then anæmia of the brain. The action of venous stasis is very similar in depriving the brain of its necessary supply of arterial blood. There are often changes in the blood at the same time with these circulatory disturbances. An elevated temperature is one of the most potent of these causes, as by it the irritability of the nerve-elements is increased. The quality of the blood may be impaired also by the introduction of poisons, either those introduced from without or those formed in the tissues of the body itself. In this category belongs also the change in the milk of nursing women induced by violent emotion. Sympathetic convulsions may be excited by almost any irritation of the sensory nerve-endings, in consequence either of increased irritability of the nerves or of diminished power of the reflex controlling centres. In regard to the presence of worms in the intestinal canal, the author admits that this may be a cause of convulsions, but insists upon the necessity of a search for other causes, since worms may be present and yet have nothing to do with the convulsions. He believes also that dentition may be of etiological importance, and does not admit as valid the objections of those who say that this is a physiological process, and therefore incapable of producing morbid symptoms. Although he does not doubt the fact of an hereditary predisposition to convulsions in certain families, he admits his inability to explain it.—*Schmidt's Jahrbücher*, May 20, 1884.

Cortical Lesions of the Brain.—Dr. M. Allen Starr, of New York, in the July number of *The American Journal of the Medical Sciences*, has collected the American cases of lesions of the central region of the brain, and carefully studied their localized symptoms. He finds that disturbance of general sensation—including the sense of touch, pressure, pain, and temperature, together with the sense of the location of a limb—may occur either in the form of subjective perceptions of such sensations without objective cause, or in the form of impairment of these sensations. In either case it indicates a disease in the central convolutions, and possibly in the adjacent portion of the parietal lobules. The power of voluntary motion of the muscles of the opposite side of the body is located in the two central convolutions which border the fissure of Rolando. Motions of the face and tongue originate in the lower third of this region; motions of the arm, in the middle third; motions of the leg, in the upper third. Spasms in, or paralysis of, a single group of muscles may indicate disease of its motor area. Extensive spasms or paralysis may indicate a large area of disease in this region, but if more marked in a single group of muscles than in others it may indicate a small focus of disease in the motor area of that group affecting other motor areas indirectly and coincidently. Paralysis following spasm in one group of muscles is a characteristic symptom of disease in the central region. Disturbance of the power of speech indicates disease in the convolutions about the fissure of Sylvius on the left side in right-handed persons, and on the right side in left-handed persons. If the patient can understand a question and can recall the words needed for a reply, but is unable to initiate the necessary motions involved in speaking, the disease is probably in the third frontal convolution and in the adjacent portion of the anterior central convolution. If the patient cannot recognize spoken language, but can repeat words after another, or can use exclamations on being irritated, the disease is probably in the first temporal convolution. If the patient can understand and can talk, but replaces a word desired by one that is unexpected, the disease is probably situated deep within the Sylvian fissure, or in the white substance of the brain, and involves the association fibres which join the convolutions just named.

Bright's Disease of Malarial Origin.—Dr. I. E. Atkinson, believing that this subject has not attracted the attention it deserves, has been led to study with reference to it all cases of malarial fever coming under his observation during the late summer and early fall of the past two years at Bayview Asylum, and the result he gives in a paper which appears in the July number of *The American Journal of the Medical Sciences*. The conclusions which he reaches are as follows: 1. Transitory albuminuria is not uncommon in the course of malarial fevers, and is due to the intense visceral congestions characteristic of these affections. It only may endure throughout the height of the congestion, recurring with each return of this, or it may persist in the intervals, in which event a higher grade of congestion is attained, more nearly approaching a condition of acute inflammation. 2. In a proportion of cases, varying with locality and type of prevailing epidemic or individual conditions, inflammation of the kidney occurs, accompanied by dropsy and the usual symptoms of nephritis. 3. The usual form of malarial nephritis is the tubal and diffuse variety. In this the inflammation seems to be most intense in the vicinity of the glomeruli. 4. Contracted kidney may occur as an advanced stage of malarial nephritis either from long-continued or frequently repeated attacks of malarial fever, or from fibrotic changes such as may ultimately occur in ordinary tubal or diffuse nephritis. It is altogether improbable that this form of malarial renal disease ever occurs primarily as purely interstitial nephritis. 5. These changes may be induced by any form of malarial fever, though they more commonly follow chronic intermittent fever. 6. The tendency of malarial inflammation of the kidney is toward recovery. But from the persistence of the impaludism or the intensity of the inflammation, structural changes may be produced that are characteristic of chronic Bright's disease, when the gravity of the affection will be as that from chronic Bright's disease from whatever cause. 7. Treatment should be directed primarily against the malarial intoxication, more especially in recent cases. A correction of this will often be followed by a complete, though often gradual, subsidence of the nephritis. Even in more chronic cases, the malarial factor in the process should definitely be destroyed if possible, after which the disease should be treated as ordinary Bright's disease.

Nerve-Stretching in the Treatment of Epileptiform Neuralgia.—Epileptiform neuralgia, or so-called incurable facial tic, is a disease characterized by neuralgic paroxysms of great intensity, occurring in one or more branches of the fifth nerve, and usually, if not always, confined to one side of the face. The paroxysms seldom last more than half a minute, and recur with great irregularity, sometimes five or six times an hour, and sometimes not more than twenty or thirty times in the twenty-four hours. They may be determined by a variety of causes, eating, speaking, washing the face, or any peripheral irritation of howsoever trivial a nature. The treatment of this affection has hitherto been eminently unsatisfactory. Nearly every known drug has been tried without effect, the only one that gave even a measure of relief being opium in large and repeated doses. Neurotomy, neurectomy, the introduction of hot needles into the foramina of exit of the different branches of the nerve, and the extirpation of one of the ganglia connected with it have all been employed, but have brought about only temporary freedom from the paroxysms. In an article on this subject in *The Practitioner* for July, 1884, Mr. W. J. Walsham claims to have cured a number of cases by stretching the affected nerve. Three of his patients had previously undergone neurotomy or neurectomy with but temporary relief, while nerve-stretching was followed by the most happy results. The author gives a brief history of each of his cases, promising to publish a more detailed account of them after a sufficient time has elapsed to satisfy him that the cure is a permanent one. Already, at the time of writing, the patients had been relieved of their pain for periods of from three months to three years. In order to reach the inferior dental nerve, the mouth being held open by a gag, an incision is made through the mucous membrane from the last molar tooth in the upper jaw to the last molar tooth in the lower. The finger is now introduced into the wound and insinuated between the ascending ramus of the jaw and the internal pterygoid muscle. The small spur-like projection of bone at the entrance of the inferior dental canal is next felt for and serves as a guide to the nerve. An aneurism needle with a very short curve is now passed and hooked around the nerve, which can be then drawn visibly into the entrance of the wound. The structures in the neighborhood to be avoided are the inferior dental artery and gustatory nerve. It should also be remembered that the internal lateral ligament, which is inserted into the spur-like process of bone, follows somewhat the same course as the nerve, and might be mistaken for it. In order to avoid this it is necessary to hitch the point of the needle in the entrance of the canal, and thence sweep it upward, backward, and outward around the nerve.

Morphine in the Vomiting of Pregnancy.—Dr. W. C. Roberts, of Albany, Wisconsin, writes that in three cases of obstinate vomiting of pregnancy he successfully used muriate of morphine per rectum in half-grain doses. Dr. Roberts asks for the experience of others with morphine given in this way.

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SPERMATOPHOBIA AND SPERMATORRHŒA.

IF we may except the able treatise of Bartholow, no recent publication has handled with more good sense and fairness than the little work of Malécot[1] a disease which is oftener to the patient a terrifying phantom of the imagination than an actuality, but which, whether fanciful or real, is certain continually to try the patience and skill of the busy practitioner.

Malécot has the merit of showing that the "classical tableau" of symptoms, so strikingly set forth by Lallemand in his too influential work published in 1840,[2] and since then adopted and improved by many well-meaning writers (to say nothing of the harvest-field which this "tableau" has been for quacks in all lands), is found, when subjected to a rigorous criticism, to have little foundation in fact, being the result of "ignorance of the pathology of the genito-urinary organs," and a "superficial diagnosis, devoid of scientific precision." Led astray by a preconceived idea, neglecting—what is assuredly of the utmost importance in diagnosis—the helpful guidance of the microscope, these writers, from Lallemand downward, have attributed to seminal losses (which either did not exist at all, or were physiological) symptoms which "were the consequence of affections of the passages, to-day well understood, such as chronic urethritis, cystitis, prostatitis, or urinary tuberculosis." Those, moreover, who are familiar with Lallemand's book know that he dwells much on certain morbid appearances of the urine—turbidity, flocculence, glairy sediments, etc. —as indicative of the presence of sperm! Even Trousseau, through deference to Lallemand's authority, committed the same error; he placed much stress on the presence in the urine of certain "granulations, and brilliant corpuscular bodies," on which Lallemand also insisted.[3] These "granulations" and "corpuscles" have been invariably found by Malécot to be formed of "bladder epithelium and pus globules, enveloped in a reticulum of fibrine; spermatozoids were absent."

Certain urethral discharges having been shown to be not seminal, and of little prognostic value, how shall we account for the accompanying symptoms which, divested of the usual exaggerations, are those of spinal erethism —of so-called "nervous irritability" or "debility," with consequent depression of the principal visceral functions? One of three suppositions will explain all of these cases, so familiar to every physician. Either the neurotic symptoms are quasi-accidental accompaniments of the bladder or urethral troubles, being dependent on some common cause producing functional nervous disturbance, as overwork—mental or physical—alcoholism, or some other vice; or they are the expression of some pathological affection of the brain or spine—an extremely frequent antecedent of the ills usually attributed to seminal losses; or else they are the results of the local catarrhal states, through the mysterious but well attested influence of the emotions and the imagination on the nervous system and the organic processes. The latter division will embrace all the victims of what Malécot rather infelicitously calls "physiological spermatorrhœa;"—young men who make extravagant account of their occasional seminal losses, and whose habitual emotional frame favors an erethistic condition of the genital organs, and of whom it may be affirmed that there is nothing the matter with them but *spermatophobia*. This latter word is so good and so apposite that it might almost be used to indicate a definite pathological syndrome, with whose outlines every physician is acquainted. Many of these unhappy persons are veritable hypochondriacs, "always preoccupied with their health, attaching an excessive importance to the least urethral discharge, whatever may be its nature;" fatiguing by their prolixity their medical attendant, who vainly endeavors by reason or by banter to rid them of their delusion.

A word of caution is here necessary; these patients are often real sufferers. If the occasional losses, urethral, prostatic or seminal, are of little or no detriment *per se*, the state of mind known as *spermatophobia* is an actual psycho-cerebral disease, akin to melancholia or the delirium of persecution. In fact, one of the cases (Obs. xvi.) reported by Malécot as "imaginary spermatorrhœa" concerns a patient who was clearly a victim of mental alienation, bordering on the *delirium of persecution*. Several cases of insanity cited by Lallemand as consecutive to seminal losses are also instances of the same kind, the insane neurosis, developed to activity, not by spermatorrhœa, but by spermatophobia. Another evil is likely to result from the intense concentration of the attention on certain organs and organic states, which is characteristic of this class of patients. By a law of nervous function, not yet well understood, the very evil which is dreaded may be engendered, and what Malécot calls "physiological spermatorrhœa" may end in the pathological kind. As means to this end we need only to refer to the well-known effect, on certain ill-balanced minds, of the perusal of a class of books, unfortunately too prevalent, and sensational advertisements (from which good newspapers are not always free), published in the interest of quackery, and appealing to all who would not wish, in the flower of their youthful days, to part with their manhood and their vitality.

One point has been clearly shown in the treatise of Malécot, namely, that the facts of the disease under consideration have been understood and interpreted differently as they have been studied by physicians or by surgeons. Surgeons have devoted their attention too exclusively to the genito-urinary apparatus, regarding the disease as a local affection and demanding local treat-

[1] De la Spermatorrhée. Doct. A. Malécot. Pp. 135. Paris, 1884.
[2] Des Pertes Seminales Involuntaires. Montpellier, 1839-40.
[3] Trousseau: De la Spermatorrhèe. Paris, 1867.

ment; physicians have emphasized the constitutional aspect, seeing in spermatorrhœa only a disease of the nervous system. The latter view seems to be the correct one. It is now very generally admitted that true spermatorrhœa as the result of urethral inflammations, of an over-sensitive urethra in the vicinity of the *vera montanum*, of "atony of the ejaculatory ducts," does not exist. "To-day the hypothesis of a sort of mysterious spermatorrhœa, supervening without ejaculation, by paralysis, by want of contractility of the ejaculatory ducts, cannot longer be maintained. The labors of Cadeat and Robin have shown that while the vas deferens is provided with muscular fibres, the ejaculatory ducts are altogether destitute of any muscular coat, being constituted of elastic fibrous tissue. Despite their name, then, they take no active part in the phenomenon of ejaculation. The presence of sperm in the urethra seems to be due to an overflow of the vesiculæ seminales, too great fulness of those diverticula overcoming by pressure the resistance of the ejaculatory canals." [1]

The division into *true* and *false* spermatorrhœa, adopted by Carlie in "Quain's Dictionary of Medicine," is more sensible than that of Malécot, who considers the subject under three heads: *physiological, imaginary,* and *pathological;* the two first divisions corresponding to Quain's false spermatorrhœa. Under the head of *physiological,* however, Malécot includes cases which are really morbid, *i.e.,* the pollutions are in excess and attended with debility, owing to erethism of the whole genito-spinal nervous apparatus; there is no doubt moreover that this genito-spinal excitement is very frequently the result of abuses of the sexual function. Patients of this kind are always benefited by marriage and moderate indulgence. True spermatorrhœa or loss of seminal fluid without erection or without sexual desires is a malady fortunately as rare as it is formidable. It is not an idiopathic affection, but is dependent on and symptomatic of certain morbid states of the cerebro-spinal axis. Venereal excesses and genital affections are only predisposing, not efficient causes, and the subjects of this disease are by inheritance neuropathic. The reflex shock, of which the pollution is the final expression, may lead to more or less exhaustion of the nervous centres, the fright and anxiety occasioned by the nocturnal losses may have a powerfully depressing influence, but the loss of semen is of no consequence whatever, it is certainly not the cause of the nervous disturbance and the prostration.

There are certain morbid conditions of the cerebrum which are an efficient cause of spermatorrhœa. Venereal excesses, as well as involuntary pollutions, are often the first symptoms of mental alienation and of general paralytic dementia, perhaps from lesion (as Ferrier supposes) of a special sexual centre in the cortex. There are certain monstrous aberrations of the sexual appetite described in works on insanity under the heads *necrophily, lycanthropy,* etc.; onanism, satyriasis, and nymphomania are sometimes noted in confirmed hysteria and epilepsy. But it is especially in irritative affections of the spinal marrow that we observe true spermatorrhœa; and Trousseau and Charcot have both pointed out the frequency of this disease in the early stages of locomotor ataxia. Much, however, is yet needed to complete our knowledge on this subject.

[1] Jour. de l'Anatomie et de la Physiologie. Pp. 106. Paris, 1875. Sur quelques ponts de structure des canaux éjaculateurs. Also Malécot, loc. cit., p. 42.

"PASTEURIZATION" AGAINST HYDROPHOBIA.

RECENT reports from Paris show that M. Pasteur has undoubtedly scored another success in his scientific work. The Commission, consisting of MM. Béclard, Paul Bert, Buclez, Tisserand, Villemain, Vulpian, and Bouley, appointed to investigate M. Pasteur's claims for the discovery of a protective vaccine against rabies, has made its report. The members have gone over Pasteur's experiments and found that without question he has been able to protect dogs against all inoculations with hydrophobic virus. A new truth is born to science, therefore, viz.: One attack of hydrophobia or of modified hydrophobia protects against another. For this alone Pasteur deserves the greatest credit. But the query next arises, Will the discovery be of any value? This depends mainly upon the question whether inoculation with the vaccine after a person is bitten will furnish an efficient protection. It is reported that Pasteur has tried this already in one case and with success. But the Commission refrain as yet from expressing a decided opinion. They will "continue their labors." Meanwhile M. Pasteur has suggested a plan of protecting the human race against rabies in case that the vaccine fails to work after a person is bitten.

This plan consists in nothing else than the compulsory "Pasteurization" or protective inoculation of all the dogs in the country, just as infants are compulsorily vaccinated. The project is a very comprehensive one, but by no means easy to carry out, in view of the large number of dogs and the rapidity with which they multiply. Besides, society must adjust its protective labors to sufficient ends. Hydrophobia is a fearful disease, but a rare one.

Perhaps one dog in a million gets it. In the whole o the United States there occurred in 1860 only 38 deaths from hydrophobia; in 1870 only 63 cases. In New York City the number of deaths from rabies between the years 1855 and 1874 was 57, the annual number ranging from 0 to 4. In England the annual mortality has of late years ranged from 20 to 50. In France hydrophobia kills about 200 persons a year.

But while the disease is a small element in mortality generally, it sometimes appears to become almost epidemic in activity. It is in such cases and under such circumstances that "Pasteurization" might perhaps wisely be enforced.

THE PROPOSED GROSS MEMORIAL PROFESSORSHIP.

WE have received some protests against the views expressed regarding the proposed memorial professorship to the late Professor Gross. We should be very sorry to have our meaning and position misunderstood, as evidently has been done. No one deserves a greater or more honorable memorial than the late Professor Gross, and for this very reason we protested against the founding a professorial chair in a private medical college, as a petty and inadequate act of commemoration. After the

chair is established, only medical students and readers of the annual catalogue will hear of it. Professor Gross' life deserves a grander and more conspicuous monument. We regret, therefore, that the committee having the matter in charge did not make a wiser choice. Already signs of dissatisfaction are being shown among the physicians in the West. Let the committee take advice that is most sincerely meant. It cannot "boom" a project to give Jefferson Medical College one hundred thousand dollars, although that is a most worthy institution. It can, however, by a very slight change, make its proposed chair of pathology a public lectureship on pathology or some allied subject, for the benefit of physicians. Such lectureships as in England annually commemorate the names of Harvey, Hunter, Lettsom, Gulston, and others, would fittingly adorn the memory of America's greatest surgeon.

THE PARISIAN AND THE BERLIN VIEW OF THE COMMA-BACILLUS, OR SPIRILLUM.

At the cholera conference in Berlin, of which we give an account elsewhere, Dr. Koch has described to a sympathetic audience his comma-bacillus, and given his most cogent reasons for believing it to be the true cause of the cholera.

Almost at the same time M. Strauss, at the Académie de Médicine of Paris, gives to an even more sympathetic audience the reasons why he thinks the comma-bacillus is not the specific organism of cholera. He states that, in connection with M. Roux, eighteen autopsies were made upon cholera patients at Toulon. In the *foudroyant* cases the comma-bacillus, or as Koch is now inclined to call it, the "spirillum," was found abundantly; but "in the subacute cases it was impossible to detect their presence." Further, Strauss says: "In a good number of cases of cholera one does not find micro-organisms in the intestinal tunics."

To strengthen his argument still more, M. Strauss says that Dr. Maddore, of Tendres, has photographed a comma-bacillus which he has found in a reservoir of water; that M. Malassez has shown him (Strauss) bacilli of comma shape obtained from dysenteric stools. M. Strauss had himself seen comma-bacilli in the vaginal mucus of women suffering from leucorrhœa, and in the uterine secretion of a woman suffering from epithelioma of the neck.

Although M. Strauss' remarks were received with much favor by the learned Académie, his argument appears to us to be disingenuous and weak. It contrasts most unfavorably with the vigorous exposition of his views made by Dr. Koch, in whom we are more than ever inclined to feel confidence.

AMERICAN JOURNALISTIC ENTERPRISE.

For four successive issues THE MEDICAL RECORD has contained reports by cable of the proceedings of the two most notable medical gatherings of the year. We have thus been able to present the main features of these meetings to our readers even sooner than they were known to the profession in Europe. It will be a matter of some pride to our American readers, as it naturally is to ourselves, that in journalistic enterprise THE RECORD has so far outstripped all previous efforts. THE RECORD was the first medical journal to use the Atlantic cable, and we can safely say that its cabled reports have far exceeded in number and length those attempted anywhere else. Our readers would, we are sure, excuse this small attempt at self-praise, if they knew the amount of extra labor, calculation, and expense involved in these efforts to present promptly and accurately the medical work of the day.

News of the Week.

THE AMERICAN MICROSCOPICAL SOCIETY held its annual meeting last week at Rochester, N. Y.

THE AMERICAN DERMATOLOGICAL ASSOCIATION.—The eighth annual session of the American Dermatological Association took place this week at West Point, N. Y.

MEDICAL SOCIETY OF NORTHERN NEW YORK.—The Fall Meeting of the Medical Society of Northern New York will be held at the City Hall, Albany, Wednesday October 1, 1884.

THE CHOLERA has continued to spread through the provinces of Southern France and Northern Italy, and has even invaded Switzerland. Its progress has been of late more rapid and its manner of attack more violent. Thus in the Western Pyrenees it spread to thirteen places within a week. In Italy it suddenly attacked La Spezia on August 22d. In three days there had been 79 deaths. The correspondent of the *New York Times* telegraphs that up to August 23d there had been 3,952 deaths from cholera in Southern France. These deaths were distributed among one hundred and thirty-one cities and villages, in fifteen departments. Up to August 15th the disease had attacked only fifteen places. In the next week it had spread to fifty-one new places. In Italy the number of deaths already is about four hundred, and this number is being increased daily. The number of provinces affected is six.

SUICIDE OF THE LATE DR. J. J. WOODWARD.—It is known that the late Surgeon Woodward, U.S.A., was insane at the time of his death, and confined in a private asylum. There seems to be little doubt now that the unfortunate man met his death by his own hands. An account states that he had been under care for about four months, but at no time was violent or in any way troublesome. He generally preferred to be let alone, and evinced a delicacy in having any intrusion upon his privacy. Though of a strong and healthy physique, he imagined himself of a delicate constitution. He was as regular as clockwork in his habits, and among the best patients in the home. On Sunday morning he was passed on the stairway by one of the lady attendants, who saw him on the edge of the porch roof. A few minutes later, before anything could be done to rescue him, he threw himself off the roof backward, falling on the steps below, receiving injuries from which he died on the afternoon of the same day.

DEATH OF DR. BURQ, THE METALLO-THERAPEUTIST.—The death is announced of Dr. Burq, of Paris, aged sixty-two. Dr. Burq's name has been made very familiar to the medical world by reason of his persistent efforts to gain a scientific standing for metallo-therapy. This he had succeeded in doing, at least in France. Of late he had been urging the prophylactic value of copper against

cholera. He had just received a mass of testimonials from mining engineers, bronze and copper manufacturers, doctors, and Sisters of Charity in favor of his copper theory. He even held a letter from a doctor who said that he had, after gargling his throat with a solution of salts of copper, sucked with impunity diphtheritic matter from a child in whose windpipe he had made an incision. Dr. Burq was rejoicing in the idea that, owing to M. Bert's influence, the Municipal Council in future would cause all wood employed in the hospitals to be steeped in cupric solution.

Death of Dr. C. W. Chamberlain.—Dr. Charles Walter Chamberlain, Secretary of the State Board of Health of Connecticut, and a member of the National Board of Health, died in Hartford on August 21st. Dr. Chamberlain was born in Providence, R. I., July 22, 1844, and was a son of the Rev. Charles Chamberlain. He was educated at Brown University, and the College of Physicians and Surgeons in this city, graduating from the latter institution in 1871. He made a specialty of laryngology, and established himself in Hartford. He was Secretary of the State Medical Society in 1876, and contributed to the Transactions of that year two papers upon throat disease, and in the following year a third paper on a similar subject. In 1877 Governor Hubbard appointed Dr. Chamberlain Examining Surgeon for the soldiers in the State hospitals. He was also for a number of years Examining Surgeon to the United States Pension Bureau, and was well known throughout the country as a distinguished sanitarian.

The Late Dr. Burq, the Copper Specific, and Pasteur.—The Paris correspondent of the London *Truth* writes: "And now a little benevolent gossip about the arch-enemies of the Cupric Saviour. Burq, 'fortified' by his medicament, has been since 1849, during every cholera visitation, in the hospitals of the towns where it was most virulent. He faced it at Toulon and Marseilles, in Paris, Rouen, London, and Eastern France. He also faced smallpox in its worst haunts. Pasteur only studies these maladies at a distance. A little virus is brought to him in a glass tube, and then he operates with it upon apes, monkeys, dogs, and guinea-pigs. He preaches *ex cathedrâ*, and all the cowards who are afraid of losing their worthless lives, and who cannot bear to think that fair play should be the great sweetener of the world and reign everywhere, laud him as a benefactor of the human race and a stamper-out of plague and pestilence. When a contagious disease burns itself out in a place where some mitigated virus has just produced as good an effect as Lourdes water, they cry out, 'Great is Pasteur!' He reminds me of Vain-Hope, the ferryman in the 'Pilgrim's Progress,' who saved people the trouble of wading through the river which lay between the land of Beulah and the Celestial Kingdom. Poultry-yard cholera, ovine carbuncle, murrain, rinderpest, smallpox, scarlatina, and every other curse upon dirt and gluttony are as severe as ever, and yet the notion is abroad that Pasteur, through his scapegoat animals, has taken the sting out of them all. Pasteur, who has not gone to Marseilles to correct or to check the theories he builds up in his torture-house in the Rue d'Ulm, has got himself appointed French Commissioner to the Health Congress which is to be held at Amsterdam. I don't at all try to convey the idea that he is a humbug. He believes in his theories, and has got to look upon himself as a divinity. When his son-in-law wrote that 'Te Pasteurium Laudamus' ('Monographe de Pasteur par un Ignorant') in one volume, the object of the praises himself corrected the proofs! Pasteur is a priest who lives by the altar. He has 25,000f. a year from the State to enable him to pursue his researches, with lodgings, coal, and lamplight, and is soon to have a delicious country residence at Villeneuve l'Etang, where a dogs' Inferno is being created for him. His mitigated viruses are a source—and a good one—of income. He has married his daughter advantageously; through Brown-Séquard's and Paul Bert's manias for vivisection *à outrance* he is on good terms with the Opportunists, and owing to his unmitigated clericalism he enjoys the friendship of the dukes and counts at the Academy. If a king starts up, he will have access to him; if the republic continues, he will go on drawing his 25,000f. a year. His son-in-law (the author of the 'Te Pasteurium Laudamus') was, a few years ago, a secretary to M. de Freycinet. It is on the cards that he may hereafter receive royal dukes at Albert Gate House."

Dr. Koch's Berlin Lecture on Cholera and the Comma-Bacillus.—An important conference upon cholera was held in Berlin, at the Imperial Board of Health, on the evening of July 26th. There were present Drs. Von Bergman, Coler, Eulenberg, B. Fränkel, Gaffky, Hirsch, Koch, Leyden, S. Neumann, Pistor, Schubert, Skreczka, Struck, Virchow, and Wolffhügel. The conference had been called at the instance of the Berlin Medical Society, whose President, Professor Virchow, explained that it was thought advisable Dr. Koch should in the first instance give a demonstration of his work before a smaller body than the whole Society, so that the proceedings might be fully reported in the medical press. He mentioned that Herr Director Lucanus and President Sydow had expressed their regret at being unable to be present, as well as many others, including Drs. Von Lauer, Von Frerichs, Mehlhausen, and Kersandt. Dr. Koch first showed various specimens of the bacillus and their method of preparation (see *Berliner Klinische Wochenschrift*, August 4th). This resembles that for the tubercle bacillus, viz., drying on a cover-glass and staining with fuchsin or methyl-olin. Koch then gave a history of his work while in Egypt and India. His post-mortem examinations led him to believe that the intestines were the nidus of the disease. At first his microscopical examinations were unsatisfactory, but finally he got fresh dejecta and acute cases, and then discovered the comma-bacillus.

This, he said, is smaller than the tubercle bacillus, being only about half or at most two-thirds the size of the latter, but much more plump, thicker, and slightly curved. As a rule, the curve is no more than that of a comma (,), but sometimes it assumes a semicircular shape, and he has seen it forming a double curve like an S; these two variations from the normal being suggestive of the junction of two individual bacilli. In cultures there always appears a remarkably free development of comma-shaped bacilli. These bacilli often grow out to form long threads, not in the manner of anthrax bacilli, nor with a simple

undulating form, but assuming the shape of delicate long spirals—a corkscrew-shape—reminding one very forcibly of the spirochæte of relapsing fever. Indeed, it would be difficult to distinguish the two if placed side by side. On account of this developmental change, he doubted if the cholera organism should be ranked with bacilli; it is rather a transitional form between the bacillus and the spirillum. Possibly it is true spirillum, portions of which appear in the comma shape, much as in other spirilla—*e.g.*, spirilla undula, which do not always form complete spirals, but consist only of more or less curved rods. The comma-bacilli thrive well in meat infusion, growing in it with great rapidity. By examining microscopically a drop of this broth culture the bacilli are seen in active movement, swarming at the margins of the drop, interspersed with the spiral threads, which are also apparently mobile. They grow also in other fluids—*e.g.*, very abundantly in milk, without coagulating it or changing its appearance. Also in blood serum they grow very richly. Another good nutrient medium is gelatine, wherein the comma bacilli form colonies of a perfectly characteristic kind, different from those of any other form of bacteria. The colony when very young appears as a pale and small spot, not completely spherical as other bacterial colonies in gelatine are wont to be, but with a more or less irregular, protruding, or jagged contour. It also very soon takes on a somewhat granular appearance. As the colony increases the granular character becomes more marked, until it seems to be made up of highly refractile granules, like a mass of particles of glass. In its further growth the gelatine is liquefied in the vicinity of the colony, which at the same time sinks down deeper into the gelatine mass, and makes a small, thread-like excavation in the gelatine, in the centre of which the colony appears as a small white point. This, again, is peculiar; it is never seen, at least so marked, with any other bacterium. And a similar appearance is produced when gelatine is inoculated with a pure culture of this bacillus, the gelatine liquefying at the seat of inoculation, and the small colony continually enlarging; but above it there occurs the excavated spot, like a bubble of air floating over the bacillary colony. It gives the impression that the bacillus growth not only liquefies the gelatine, but causes a rapid evaporation of the fluid so formed. Many bacteria also have the power of so liquefying gelatine with which they are inoculated, but never do they produce such an excavation with the bladder-like cavity on the surface. Another peculiarity was the slowness with which the gelatine liquefied, and the narrow limits of this liquefaction in the case of a gelatine disc. Cultures of the comma-bacillus were also made in Agar-Agar jelly, which is not liquefied by them. On potato these bacilli grow like those of glanders, forming a grayish-brown layer on the surface. The comma-bacilli thrive best at temperatures between 30° and 40° C., but they are not very sensitive to low temperatures, their growth not being prevented until 17° or 16° C. is reached. In this respect they agree with anthrax bacilli. Koch made an experiment to ascertain whether a very low temperature not merely checked development but killed them, and subjected the comma-bacilli to a temperature of —10° C. They were then completely frozen, but yet retained vitality, growing in gelatine afterward. Other experiments, by excluding air from the gelatine cultures, or placing them under an exhausted bell-jar, or in an atmosphere of carbonic acid, went to prove that they required air and oxygen for their growth; but the deprivation did not kill them, since on removing them from these conditions they again began to grow. The growth of these bacilli is exceptionably rapid, quickly attaining its height, and after a brief stationary period as quickly terminating. The dying bacilli lose their shape, sometimes appearing shrivelled, sometimes swollen, and then staining very slightly or not at all. The special features of their vegetation are best seen when substances which also contain other forms of bacteria are taken—*e.g.*, the intestinal contents or choleraic evacuations mixed with moistened earth or linen and kept damp.

A most important statement was that the comma-bacillus seems to be killed by the bacteria of putrefaction, and consequently agents that destroy the latter organisms without the former may really do injury, by removing from the cholera bacillus an impediment to its growth. As for destructive agents to the bacillus, he found it killed by solutions in the following proportions: oil of peppermint, 1 in 2,000; sulphate of copper, 1 in 2,500 (a remedy much employed, but how much would really be needed merely to hinder the growth of the bacilli in the intestine!); quinine, 1 in 5,000; and sublimate, 1 in 100,000. In contrast with the foregoing measure for preventing the growth of these bacilli is the striking fact that they are readily killed by drying. This fact is proved by merely drying a small drop of material containing the bacilli on a cover-glass, and then placing this over some of the fluid on a glass slide. With anthrax bacilli vitality is retained for nearly a week; whereas, the comma-bacillus appears to be killed in a very short time.

Dr. Koch having found and cultivated the comma-bacillus, and ascertained its distinctive character, next proceeded to investigate its relation to cholera. In all there were now about one hundred cases of cholera in which the bacillus had been found, while it was never found in connection with other diseases. Three different views, said the speaker, as to its relation to the cholera process are tenable. 1. That the disease favors the growth of these bacilli by affording them a suitable soil. If so, it would mean that the bacillus in question is most widely diffused, since it has been found in such different regions as Egypt, India, and France; whereas the contrary is the case, for the bacilli do not occur in other diseases, nor in the healthy, nor apart from human beings in localities most favorable to bacterial life. They only appear with the cholera. 2. It might be said that cholera produces conditions leading to a change in form and properties of the numerous intestinal bacteria—a pure hypothesis; the only instance of such a conversion refers to a change of physiological and pathogenic action, and not of form. Anthrax bacilli under certain conditions lose their pathogenic power, but undergo no change in shape; and that is an instance of a loss of pathogenic properties, while there is no analogy to support the view of the harmless intestinal bacteria becoming the deadly cholera bacilli. The more bacterial morphology is studied, the more certain is it that bacteria are constant in their form; moreover, the comma-bacillus retains its special characters unchanged through many generations

of culture. 3. Lastly, there is the view that the cholera process and the comma bacilli are intimately related, and there is no other conceivable relation but that the bacilli precede the disease and excite it. "For my own part," said Dr. Koch, "the matter is proved that the comma-bacilli are the cause of cholera."

Dr. Koch then described his attempts to inoculate lower animals with the bacillus, and explained the cause of his failure in the natural immunity of the animals against the disease.

In advocating the local Indian origin of the disease he said: That the virus can be reproduced and multiplied outside the body is apparent, since the bacillus can be cultivated artificially, and its growth is not affected by comparatively low temperatures. Probably it does not grow in streams and rivers, where, owing to the current, a sufficient concentration of nutrient substance does not occur; but in stagnant water and at the mouths of drains, etc., vegetable and animal refuse may accumulate and afford the necessary nutriment. Thus is explained the propagation of cholera by the subsoil water, and the increase of epidemics with the sinking of its level, which lessens the flow and diminishes the amount of surface water. Admitting the dependence of cholera upon this micro-organism, it is impossible to conceive the disease having an autochthonous origin in any particular place; for a bacillus must obey the laws of vegetable life, and have an antecedent; and since the comma bacillus does not belong to the widely diffused micro-organisms, it must have a limited habitat. Therefore, the occurrence of cholera on the delta of the Nile does not depend on its resemblance to the delta of the Ganges; but the disease must have been imported there as it is into Europe. It was once thought that an outbreak in Poland had a local origin until it was discovered to have been introduced from Russia. Again, about ten years ago, there was a sudden outbreak at Hamar (Syria), thought to be an instance of local origin, but erroneously, as shown by a statement of Lortet, who told Koch, when at Lyons, that the epidemic had been introduced into Hamar, where he was at the time, by Turkish soldiers from Djeddah. All great epidemics of cholera began in South Bengal, where the conditions for the development and growth of the bacillus are most perfect.

Dr. Koch concluded with a reference to the prospective practical value of his discovery. It would assist in leading to intelligent prophylaxis and treatment, and in making an early diagnosis.

At the close of his lecture a discussion took place, which we shall report in our next issue.

Pleuro-pneumonia in the West.—A herd of Jersey cattle infected with pleuro-pneumonia were sold at auction recently, and the disease was thus disseminated through several herds in Illinois, and perhaps other States. The condition of affairs is serious, though incomparably less so than if the disease had reached the great herds of beef cattle of the West instead of smaller herds of registered cattle.

A Philanthropic Surgeon.—The late Sir Erasmus Wilson was one of the few doctors who are both able and willing to give. Sir Erasmus distinguished himself by many benefactions. He founded a chair and a museum of dermatology, and a chair of pathology, built a master's residence at Epsom College, and part of a sea-bathing hospital at Margate. He brought Cleopatra's Needle to England at an expense of $50,000, so that the obelisk may properly be considered a surgeon's needle, and he gave away a great deal of money in private benefactions.

Hog Cholera has been prevailing since last winter in certain counties of New Jersey.

Druggists' Conventions. — The second annual meeting of the National Druggists' Association was held at Milwaukee, Wis., August 25th and 26th. This is the association which aims to promote the "Campion plan" for keeping up prices and cutting off the "scalpers." During the past year it is claimed to have been partially successful. The Association numbers about twenty-five hundred members.

On August 26th, the National Pharmaceutical Association convened in the same city.

Obituary.

THE LATE SURGEON J. J. WOODWARD, U.S.A.

War Department,
Surgeon-General's Office,
Washington, D. C., August 20, 1884.

In announcing to the officers of the Medical Department the death of Joseph Janvier Woodward, Surgeon and Brevet Lieutenant-Colonel U. S. A., which occurred near Philadelphia, Pa., August 17, 1884, the Surgeon-General wishes to offer his tribute of respect to the memory of the deceased, whose distinguished career and valuable services for a period of twenty-three years have shed lustre on the corps, and for whose untimely loss feelings of profound regret will be shared alike by his comrades in arms and by the profession at large.

Dr. Woodward was born in Philadelphia, Pa., October 30, 1833, and was educated at the Central High School of that city, graduating with honor as Bachelor of Arts in 1850, and receiving the degree of Master of Arts from the same institution in 1855.

He graduated in medicine at the University of Pennsylvania, April, 1853; entered the Army as Assistant Surgeon, August 5, 1861; became Captain and Assistant Surgeon, July 28, 1866; Major and Surgeon, June 26, 1876. "For faithful and meritorious services during the War" he received the brevets of Captain, Major, and Lieutenant-Colonel U. S. A.

He was assigned to duty in this Office May 19, 1862, and from that date until the beginning of the illness which terminated in his death was intimately identified with its professional and scientific work.

While the valuable results of his life's labor are comprehended in a long list of miscellaneous publications, both professional and scientific, too familiar to the corps to require individual mention, his greatest triumphs were won in the field of microscopical investigation in normal and pathological histology, and in his happy application of photo-micrography to the purposes of science. In these pursuits he attained remarkable success, and achieved an enviable, world-wide reputation, leaving to science and medicine lessons of undoubted value and usefulness. Of his strictly professional work the medical portion of the "Medical and Surgical History of the War of the Rebellion" was the crowning achievement. In the second part of this work he developed the results of his careful investigations into the nature and pathology of the intestinal diseases which had proved so fatal in the

late war. Here also he displayed his wonderful capacity for that minute and exhaustive research which forms so striking a feature of his writings.

As in the case of his co-laborer, Otis, he yields to other hands the honor of completing his labors.

In addition to his engrossing professional duties, his restless activity of mind led him to seek recreation in his favorite studies—physics, art, and philosophy.

Endowed with a retentive memory and of untiring industry, he acquired a vast store of information which he held available for use at will; fluent of speech, he took delight in the expression of his views and opinions both in social converse and in the arena of scientific debate.

His fund of knowledge, his strong convictions, his tenacity of opinion, and his quick perception made him a controversialist of no low order.

With such a record, it is needless to speak of his zeal, his ambition, or his devotion to his profession, and especially to the reputation of the corps of which he was so bright an ornament.

Of a sensitive, highly strung, nervous organization, the confinement, anxiety, and labor to which he was subjected in his attendance upon the late President Garfield during his long illness, proved too much for a mind and body already overstrained by incessant labor, and precipitated the illness which finally terminated his life.

At the time of his death Dr. Woodward was a member and ex-President of the American Medical Association, a member and ex-President of the Washington Philosophical Society, a member of the National Academy of Science, of the Association for the Advancement of Science, of the Academy of Natural Sciences of Philadelphia, and of the College of Physicians and Surgeons of Philadelphia. He was an honorary member of several American and foreign scientific, medical, and microscopical societies, and the recipient of many distinguished honors from learned bodies in this country and abroad.

R. MURRAY,
Surgeon-General U.S.A.

Reviews and Notices.

TRANSACTIONS OF THE AMERICAN GYNECOLOGAL SOCIETY. Volume VIII. For the Year 1883. New York: D. Appleton & Co. 1884.

WE have not sufficient space allowed us to attempt a critical review of this interesting volume. We can only furnish to the general reader some indications of its contents. We would say, in the first place, however, that the papers and discussions are quite up to the high general average, and express better than do most society transactions, the views of America's leading specialists in gynecology. On the whole the papers have a more general interest than is the case with much other specialistic work.

A perusal of the volume before us shows that the gynecologists continue to entertain a healthy difference of opinion upon some of the elementary points in their specialty. For example, Dr. Emmet describes a new operation for lacerated perineum, and in one article wipes out all his previous teachings and experience on this subject. We are left finally in doubt whether there is any perineum, and whether, if it exists, it has any function whatever. The well-worn subject of dysmenorrhœa is discussed by Dr. C. D. Palmer, and by Drs. J. R. Chadwick and Fordyce Barker. A few, more or less, new specifics for this trouble are given; such as apiol, cimicifuga, pulsatilla, coca, and ammonia. Perhaps it may be found in time that there is no specific for any form of dysmenorrhœa, but that a great many drugs relieve equally well the same distresses. We are now told that such a thing as mechanical dysmenorrhœa rarely exists. Dr. R. S. Sutton read a paper on "Cleanliness in Surgery" (subsequently read again before the American Academy of Medicine), in which he introduced the subject of "Listerism." Dr. Lusk made an interesting plea for the spray, but gave no very cogent reasons for its retention. Dr. A. Reeves Jackson made an effective argument against the operation for extirpation of the cancerous uterus, which he considered useless and unjustifiable. Dr. George J. Engelmann denounced the excessive use of ergot in obstetric practice, and thought that this drug should only be given in the non-gravid uterus. He exaggerated the dangers and misuses of ergot. Dr. Edward W. Jenks described a new mode of operating for fistula in ano. Dr. Albert H. Smith brought up the subject of "Hot Water in Secondary Hemorrhages after Pelvic Operations." Hot water is all the vogue, and gynecology (which is nothing if not fashionable) commends it in the present volume. Dr. Goodell, to be sure, finds that it is not always potent, and recommends vinegar as an addition.

In the annual address of the President, Dr. Gilman Kimball, attention is called to the life of Dr. Nathan Smith, and to the fact that he independently performed ovariotomy in 1821, knowing nothing of McDowell's operation nine years before.

As regards typographical appearance the volume continues to be the very dude of medical "transactions."

SHAKESPEARE AS A PHYSICIAN: Comprising every Word which in any Way relates to Medicine, Surgery, or Obstetrics found in the Complete Works of that Writer; with Criticisms and Comparison of the Same with the Medical Thoughts of To-day. By J. PORTMAN CHESNEY, M.D. 8vo, pp. 226. Chicago, Ill.; St. Louis, Mo.; Atlanta, Ga.: J. H. Chambers & Co., 1884.

THE title of the above work very clearly indicates its scope and purpose. Beginning with obstetrics, the author gives us quotations from every play containing even remote and incidental allusions to that subject. It is a medical concordance of Shakespeare, with comments and explanations. The author says, no doubt with truth, that his task has not been a slight one. Whether the result is worth the trouble, is a question that will be answered very differently, according to the standpoint of the reader. For our part we are glad to find that doctors occasionally have the taste and inclination to wander a little in the byways and produce some work outside the beaten paths of pathology. Dr. Chesney has done his work conscientiously, and it furnishes a volume of curious interest to the physician. His comments are perhaps the least interesting, and are at times unnecessarily discursive and pedantic; still, not much other than explanation and a superficial exegesis could be expected.

The work is illustrated with a number of curious and more or less appropriate cuts.

A TEXT-BOOK OF THE PRINCIPLES OF PHYSICS. By ALFRED DANIELL, M.A., Lecturer on Physics in the School of Medicine, Edinburgh. London: Macmillan & Co. 1884.

THIS book, says the author, was primarily designed as a contribution to medical education, and as such he hopes it may be found useful. He treats of physics in a very different manner to that in the older works of fifteen or twenty years ago. His book is written strictly from the modern scientific standpoint, and gives the latest and best conceptions of matter and the physical forces.

Some idea of the systematic, yet natural and thorough manner with which the subject is treated, may be gathered from the titles of the chapters. These are in their order: Time, Space, and Mass; Measurements; Work and Energy; Kinematics; Kinetics; Attraction and Potential; Gravitation; Matter; Solids; Liquids; Gases; Heat; Sound, etc.

It would be a great thing for medical students if they were thoroughly disciplined in a work like this. We fear, however, that it would befog the untrained brain of the majority of them.

Reports of Societies.

THE BERLIN SOCIETY OF INTERNAL MEDICINE.

Stated Meeting, July 14, 1884.

HERR LEYDEN, PRESIDENT, IN THE CHAIR.

(Special Report for THE MEDICAL RECORD.)

THE Society having been called to order by the President, HERR KRONECKER exhibited an

APPARATUS FOR THE INFUSION OF SALINE SOLUTIONS

into the general circulation. The speaker stated briefly the principles of this method, which, though by no means a new procedure, was still not so widely known and appreciated as, by reason of its value, it ought to be. There were several precautions to be observed in employing this method for restoring the normal fluidity of the blood, the first and most important of which was to secure a suitable solution. He had formerly thought it important to add a certain proportion of soda to the solution, but had recently omitted the alkali and had obtained equally good results. Experiments on animals had shown that a solution which was suitable for one species might be harmful to another, hence it was not safe to conclude, without further trial, that a mixture which was well borne by certain animals would be suitable for the human subject. Some recent experiments by Aronsohn and Marckwald had shown that a proportion of $\frac{7.3}{100}$ part of chloride of sodium to 100 parts of distilled water (about 56 grains to the pint) caused no irritation to the mucous membranes or subcutaneous tissues, and the speaker proposed a solution of this strength as the one best adapted for intra-venous injection.

Regarding the proper method of introducing the solution into the circulation, Herr Kronecker expressed a decided preference for intra-venous over subcutaneous injection, as offering the greater certainty that the fluid will be taken up by the blood stream. But great care should be observed not to inject the solution too rapidly or with two great pressure, because of the danger of filling the heart with water and driving from it all the blood. Having made a number of observations on this point, the speaker had been able to set five drachms per second as the limit beyond which we should not pass in making intra-venous injections of fluids other than blood. For making the injection we need a bottle, graduated to drachms, to which a rubber tube with canula attachment is fastened. By holding the bottle at a proper height we are enabled to force the fluid at any desired rapidity into the veins; but as the pressure varies according to the amount of fluid contained in the flask, the height at which the latter is held must be constantly raised during the operation. In order to obviate the necessity of this, Herr Kronecker had recently employed a Mariotte flask, by means of which a constant pressure is obtained, whatever may be the variation in the quantity of the contained fluid.

One great advantage possessed by the saline solution was that it could be disinfected. The air in the flask could also be kept perfectly pure by allowing it to pass through cotton saturated with a disinfectant solution.

HERR LEYDEN thought that the question of saline infusions was a timely one in view of the

EPIDEMIC OF CHOLERA

in southern Europe. He hoped that the measures which had been adopted would be effectual in keeping the disease out of Germany. But it was only the part of ordinary prudence to make every preparation to grapple with it should it once gain admittance. He thought that in the event of being called upon to treat cholera the method of intra-venous injections just demonstrated would find a ready application.

HERR S. GUTTMANN thought it would be advisable to appoint a commission to determine just how far transfusion was of value in the collapse consequent upon the loss of fluids in cholera, and also to settle, as far as might be, other points in the prophylaxis and therapy of the disease. Koch's discovery of the parasitic nature of the affection had as yet led to no practical therapeutic results, and we now stood in the presence of cholera just as defenceless as we were a decade ago.

The discussion then turned upon the

PREVENTION AND TREATMENT OF CHOLERA.

HERR FRAENTZEL recalled the fact that it was only during the last epidemic in Berlin that attempts were made to improve the hygienic conditions and that physicians sought to formulate any dietary rules. Since that time considerable advances had been made in these subjects. Experiments had proven the futility of subcutaneous injections of saline solutions, for the tissues would not absorb the fluid, and the only result of an injection was the formation of a tumor, which disappeared only after the lapse of considerable time. He did not deny, however, that intra-venous injections might prove more useful.

The speaker regretted the fact that less attention was now paid to the subject of disinfection than formerly. He called attention also to the danger from mill-streams which contained large quantities of filth and decomposing matters, and he hoped that some measures would be taken looking to their purification.

HERR P. GUTTMANN had made a trial of the infusion of saline solutions during the epidemic of 1866, but all the patients so treated died. He did not believe the cholera would reach Berlin this year, but promised, in case it did, to make further trials with the method just demonstrated. He insisted upon the necessity of removing all cholera patients to a special hospital, since, were they treated in all the hospitals throughout the city, there would be created so many additional foci of disease.

HERR LOEWENSTEIN did not anticipate any brilliant results in the treatment of cholera by saline injections. Restorative measures were needed, and unless it were shown that saline infusions exerted an analeptic action upon the heart, he could not place any dependence upon them.

HERR GUTTSTADT spoke of the danger of rectal injections in cholera, as any irritation of the mucous membranes was liable to excite a diphtheritic inflammation.

HERR LEYDEN thought, notwithstanding the general opposition to saline injections, that possibly, owing to new methods of preparation and perfected apparatus, this mode of treatment might eventually be found useful.

A cholera commission was then appointed, consisting of Herren P. Guttmann, Baer, Goltdammer, S. Guttmann, Lehnert, Riess, and Wernich.

HERR P. GUTTMANN then read a paper upon

ANTIPYRIN.

A number of remedies had recently been made by synthetic processes, which, in suitable doses, possessed a febrifuge action. They were all derivatives of, or closely allied to, chinolin. One of these substances was antipyrin, chemically known as dimethyloxychinicin. It is freely soluble in water and alcohol, possessing a slightly bitter taste, and exists in the form of a powder of a whitish color faintly tinged with yellow. One of its most valuable properties is its great solubility (seven grammes of antipyrin dissolving in three grammes of water), thus rendering it especially adapted for hypodermic use. The author had employed the remedy in a large number of cases of typhoid fever, pneumonia, pulmonary phthisis, measles, scarlatina, and other diseases marked by a high degree of fever. He had found in every instance that the exhibition of a drachm to a drachm and a half of an-

tipyrin, in half-drachm hourly doses, reduced the temperature curve for at least five or six hours, and sometimes for a still longer period. The drug may also be given in a single large dose of a drachm, or in fifteen-grain doses five times repeated, with similar beneficial effects. The dose for children is seven grains frequently repeated.

When half-drachm doses are given, the temperature begins to fall even during the first hour, but reaches its lowest point at the end of the third or fourth hour. The minimum reduction observed by the author was 1° F., and the maximum 7°. The temperature begins to rise again about an hour after the last dose is taken, but the ascending curve is so very gradual that it is usually ten or twelve hours before the remedy need be again exhibited. There are no unpleasant symptoms produced; with the occasional exception of vomiting. The only pyretic condition over which antipyrin exerts no effect is intermittent fever, though even here the paroxysm seems to be less severe if a full dose of the drug has been given before its onset.

The febrifuge action of antipyrin is only one-half as powerful as that of quinine, that is, it requires one drachm of the former to produce the effect obtained by thirty grains of the latter. Unfortunately at present antipyrin costs two-thirds as much as quinine, hence it cannot be recommended on account of its cheapness. When it becomes possible to lower the cost of its production, it will rank as a febrifuge much preferable, in most cases, to quinine.

Herr Tillmanns had employed antipyrin in a number of cases with success at the Charité clinic. In eight cases of intermittent fever he had cut short the paroxysms by antipyrin, but immediately upon the discontinuance of the remedy the temperature rose again. He had found the drug of especial value in the pyrexia of phthisis. In typhoid fever the patients expressed themselves as feeling much better after taking half-drachm doses of antipyrin, and the drug seemed also to exert a controlling effect upon the diarrhœa. The antipyretic action of the drug was in every case prompt and certain, and was accompanied, especially in phthisis and pneumonia, by a rather profuse perspiration. No injurious effects were ever observed.

In conclusion, the speaker stated that the results obtained by him were in accord with those of the author of the paper. He would, however, advise beginning the administration of antipyrin by small doses (10–15 grains or less), which could then be increased if necessary. This caution should specially be heeded in phthisis, as he had seen rather alarming symptoms of collapse follow the exhibition of large doses.

On motion, the Society then adjourned.

Irreducible Hernia Cured by Sneezing.—Dr. John Burke, of this city, sends us the history of a man, aged sixty, who had suffered for several years from an irreducible left inguinal hernia. Several surgeons had tried to get it back, but in vain, and the tumor became as large as a child's head. One night he was attacked with a fit of coughing and sneezing, which continued about half an hour, according to his own and wife's report, when he felt something give way within him. He heard a gurgling and the hernia had disappeared. In the morning he sent for Dr. Burke who found that the mass had gone. The ring was as large as a silver dollar. There was great pain and tenderness about the parts and he had local peritonitis. After a few days he recovered. He since has been fitted with a truss and the hernia has not come down. Dr. Burke concludes: "Would it not be well in some of these cases to give the patient a good pinch of hellebore to bring on sneezing? Perhaps it may tear away the adhesions and cause the gut to return. I would ask your readers if they ever met a case of hernia reduced in that manner."

THE BIOLOGICAL SOCIETY OF PARIS.

Stated Meeting, July 19, 1884.

M. Paul Bert, President, in the Chair.

(Special Report to The Medical Record.)

The scientific work of the meeting was begun by M. Rabuteau, who made a few remarks upon the

TANNATES IN THE TREATMENT OF CHOLERA.

He prophesied that the workmen in the tanneries near Bièvre would escape cholera in case of an epidemic occurring there. In the case of a patient attacked by diarrhœa in the first stage of cholera, he would begin by administering a laxative of castor-oil or the sulpho-carbolate of soda, and would follow this up by the wine or tincture of catechu or some other of the anti-cathartics containing tannin. He would permit the use of apricots, strawberries, or any fruits containing tannin, but would forbid melons.

M. Beauregard had been studying the

HABITS OF THE SPANISH FLY,

and related some of the facts which he had discovered in his investigations. The leaves of the lilac are the favorite food of these insects. The flies lay their eggs in the ground, digging a burrow some distance below the surface, and there depositing two little spheres each containing from sixty to eighty eggs. The grubs are hatched at the end of two weeks. Both the grubs and the flies subsist entirely on the saccharine juices of plants, and never eat the eggs of other insects. Cantharidine is present at every stage of development of the insect. Vesication may be obtained by using the eggs or the larvæ as well as by using the fully developed fly.

M. Rémy related some results which he had found to follow upon

EXCITATION OF THE SPERMATIC PLEXUS.

In the course of certain experiments upon the great sympathetic nerve in the Guinea-pig, he had found that irritation of a small ganglion, lying just anterior to the kidney, caused a seminal ejaculation, and when continued, excited an erection. The action was centrifugal, for, if the nerve were divided, central irritation produced no result.

M. Quinquand gave the results obtained by him in certain experiments made to determine

THE PATHOGENESIS OF URÆMIA.

The opinion of pathologists generally of the present day is that the uræmic symptoms are not caused by the accumulation of urea in the blood, but the speaker claimed that the experiments conducted by M. Gréhant and himself proved that this opinion was incorrect. In the frog, the subcutaneous injection of fifteen grains of urea was followed by convulsions, tetanus, and death from arrest of the respiratory movements. The heart continued to beat several minutes after the cessation of respiration. In the Guinea-pig, epileptiform convulsions and opisthotonus were produced. In the dog, the symptoms were those of coma, and were followed by death in from fifteen to thirty minutes. The dose of urea necessary to produce these results is rather large; in the Guinea-pig, 75 to 90 grains are required; in the rabbit, 120 to 150 grains; in a dog weighing 6½ to 9 pounds, 150 to 180 grains. The proportion of urea in the blood is, however, not large, only from three to six parts by weight per thousand.

M. Richet said that he had often injected many times larger amounts of urea in the dog without obtaining any results. He used the substance in very dilute solution.

M. Quinquand said that with dilute solutions there were never any uræmic symptoms, an increased secretion of urine was the only result produced.

M. Frank asked whether the so-called uræmic symptoms observed by M. Quinquand might not have been caused by the irritation of the skin, resulting from the

injection of these concentrated solutions, for M. Brown-Séquard had seen like symptoms produced by irritant injections.

M. Féré presented a communication upon

PARTIAL SOMNAMBULISM.

An hypnotized subject who is cataleptic or lethargic may, by means of friction made over the vertex, be thrown into a third somnambulistic state. If the friction be made over one side only the condition is one of hemi-somnambulism. If, instead of general friction over the vertex, strong pressure be made over certain portions of the scalp, partial somnambulism of that region, whose motor centre in the cortex corresponds to the point pressed upon, results. Thus one-half of the face, one arm, or one leg may be affected. It is even possible to cause partial somnambulism of the upper portion only of the face by pressing upon that part of the skull lying above a horizontal line prolonged from the level of the eyebrows, and behind a vertical line drawn posterior to the mastoid process. This was the situation of the cranial lesion in a case of traumatic tic of the eyelids observed once by M. Féré.

M. Gibier then related some experiments upon the

INOCULATION OF RABIES

in birds. He found that the intensity of the virus increased in direct ratio with the number of inoculations practised. The period of incubation, when the virus was injected into the anterior chamber of the eye, was twelve days.

The Society then adjourned.

Correspondence.

INTERNATIONAL MEDICAL CONGRESS.

(From our Special Correspondent.)

COPENHAGEN, DENMARK, August 16, 1884.

THE SUCCESS OF THE CONGRESS—THE NOTABLES PRESENT—THE SPEECHES OF JACOBI AND NOYES—AMERICAN ELOQUENCE — DR. SAYRE AND HIS PLASTER JACKET—HOW CRUDELI TREATED MALARIA—VIRCHOW AND HIS SUBJECT—PASTEUR AND HIS IMPRESSED AUDIENCE—THE COLLECTIVE INVESTIGATION COMMITTEE—SOCIAL ENJOYMENTS—WORK AND PLAY.

You have doubtless received by this time my full cable despatches of the meeting of the International Medical Congress here, and have formed an estimate of what has been done—not only what has been done in a strictly scientific but a social way. The meeting was a great success in every particular. The weather was charmingly pleasant, and all the other accesssories were at hand to enable the Committee of Arrangements to follow out their plan within as well as without doors to the satisfaction of every one.

Among the prominent medical men from New York who were present and took a more or less active part in the proceedings were Drs. A. Jacobi, H. D. Noyes, Joseph W. Howe, and Lewis A. Sayre. Dr. Jacobi made an impressive and telling address on the eve of the adjournment, and well represented the cosmopolitan spirit of the medical profession of America. Dr. Noyes also made a thrilling speech at the dinner of the Ophthalmological Section on Monday, in response to the health of the American visitors. He was merely a delegate of a large working community on "the other side" who had a deep sense of love and reverence for the old countries, and especially for Denmark, and he made his audience feel it.

Dr. Sayre gave some exhibitions of his plaster-of-Paris jacket, which being novel to most of his hearers attracted a good deal of attention. If any one who has attended the recent meetings of the British Medical Association for the past few years, or other medical gatherings in Great Britain and elsewhere, is not now acquainted with the Sayre jacket, the reasons why it should be used in all cases, and the way it should be used, he deserves to be pitied as an ignoramus, or at least an inattentive listener. Certainly the distinguished surgeon and his son have spared no pains to such an end, either as to time, place, circumstance, or surroundings. But, as before remarked, his demonstrations were well received. The most interesting subject presented in the addresses was that on malaria by Professor Crudeli, of Rome. This has doubtless been published with the cable despatches. The subject was one that interested practitioners generally, although some of the views enunciated by the distinguished hygienist were somewhat striking, if not heretical in their tendency. The courteous attention of the large audience throughout the delivery of the address attested its merit and its widespread applicability to the wants of his hearers.

Virchow drew a crowd of hearers, more on account of himself than his subject. He did his best to infuse interest into his theme, and this, considering his impressive delivery and forcible eloquence, is saying a great deal. But he was compelled for the most part to confine himself to abstruse reasoning on mere theories, and was at times tiresome and heavy.

Pasteur came before his hearers with the *éclat* of a star actor in a celebrated part. Both he and his subject were interesting, but the former even more than the latter. The audience hall was crowded to its uttermost, and there was infused in his delivery, in his presentation of striking facts, and in the apparently modest summing up of results, a sentimentality which told strongly on his hearers. But Pasteur is a great man, an original thinker, a hard worker, and one who knows how to make his work appreciated. The principal points in his address were cabled as fully as possible in the rush to get everything in the shortest time, but perhaps a little more of details as to experiments performed and their results may be acceptable just here.

When he had discovered his method of vaccinating dogs with hydrophobic virus, and so made many dogs insusceptible to hydrophobia, he requested from the government a competent committee to judge of his results. The request was granted by the Minister of Education (M. Fallières), who appointed Béclard, Paul Bert, Boully, Tisserand, Villemain, and Vulpian, members of the committee. He stated that the committee had just sent its report to the Minister. The following were its most important points :

Pasteur gave 23 vaccinated dogs to the committee. These were compared with 19 non-vaccinated dogs selected by the committee.

On June 1st 2 vaccinated and 2 non-vaccinated dogs were inoculated by trepanation from a rabid dog.

On June 3d 1 vaccinated and 1 non-vaccinated dog were bitten by a rabid dog.

On June 4th 1 vaccinated and 1 non-vaccinated dog were bitten by a rabid dog.

On June 6th the rabid dog died, and virus was taken from it and by trepanation inoculated into 3 vaccinated and 3 non-vaccinated dogs.

On June 10th 1 vaccinated and 1 non-vaccinated dog were bitten by another rabid dog.

On June 17th 1 vaccinated and 1 non-vaccinated dog were bitten by one of the non-vaccinated dogs, which had become rabid after the inoculation by trepanation on June 1st.

On June 20th 6 vaccinated and 4 non-vaccinated dogs were inoculated by injection into a vein.

On June 28th 2 vaccinated and 2 non-vaccinated dogs were bitten by a rabid dog.

The commission reported that of the 19 non-vaccinated dogs 3 out of 6 bitten became rabid, 5 out of 7 inoculated into a vein became rabid, and all the 5 inoculated by trepanation became rabid, but among the

23 vaccinated dogs not one single case of hydrophobia occurred.

One of the vaccinated dogs died on July 13th from *diarrhée noire*. At once some virus was taken from this dog and inoculated by trepaning into three rabbits and one Indian pig. All these four animals are still quite well, which is a certain proof that the dog did not die from hydrophobia. The commission, of its own accord, now intend to vaccinate twenty dogs in order to ascertain results independently of M. Pasteur.

Professor Pasteur finished his address by stating that animals are proportionately less infected by bites from dogs than by inoculation. He emphasized that his experiments had only produced results concerning animals, but that he considered it most likely that if the dog could thus be made insusceptible of hydrophobia, the source of this terrible disease in man would be extirpated, and the question as to prophylaxis both for dog and man would be solved.

Sir Wm. Gull's address on the importance of a collective investigation was well received although it dealt largely with truisms that were well appreciated by all progressive men. The adoption of the recommendation for a National Investigation Committee was a foregone conclusion. The selection was made from the different countries as follows, and at the next meeting of the Congress in Washington, there will probably be formulated some acceptable working plan. The representatives for the different countries were: For America—Drs. Jacobi, Austin Flint, and Billings; England—Sir James Paget, Acklan, Gull, Risdon Bennett, Mahomed, and Isambord Owen; for Germany—Ewald and Guttman; Norway—Bull; Denmark—Finè and Panum; France—Verneuil, and Lepine.

It was surprising to note the busy character of the members in attendance at the different general meetings and at the sessions of the sections. The attendance in all was large, and yet each listener was interested, and all this despite the thousand and one allurements from the municipal authorities and citizens generally for purely social enjoyments. But there was time left for these. The Tivoli Gardens was the great centre of attraction. There was dancing, concerts, and other varieties of light amusement, and thither the majority of the socially inclined repaired after the hard work of the day and evening. During the Congress a public luncheon was provided free of expense to the members, while public dinners were given every day by invitations. All the museums and hospitals were also thrown open to the members.

In my first cable I alluded to a slight confusion in the programme, but this was only manifest during the first day, as afterward the affairs of the Congress progressed like clockwork, with nothing in the way of unpleasant discussion or obstructive jar to mar the interest and harmony of the notable eighth session of the International Congress.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE DULL SEASON—BRITISH VERSUS CONTINENTAL SPAS—THEIR LOSS OUR GAIN—CHOLERA—QUARANTINE HORRORS—CUSTOM-HOUSE TROUBLES—DEATH OF SIR ERASTUS WILSON.

London, August 16, 1884.

There is not much stirring just now in medical London. The medical schools are closed till October. Most of the societies closed some months ago. All the doctors who can have followed the example of their patients and rushed off either to the mountains, the moors, the country, or the seaside. Our British health resorts are more than usually crowded this year, owing to the presence of cholera on the continent. Many people who have hitherto paid regular visits to some of the continental spas every summer have been obliged to try and find a substitute this year in some of our own watering-places. The present season therefore promises to be a very profitable one to the inhabitants of our health and holiday resorts—most of them are crowded. At many seaside places bathing begins at four A.M. and goes on actively until the afternoon; at some, bathers may be observed literally "from early morn till dewy eve." Undoubtedly many even of those professedly in search of health are not invalids in any sense of the word; but a certain proportion of them are, and a good many fees are thus likely to drop into the pockets of our own medical men that would otherwise find their way into those of our foreign brethren.

The loss to the Continental spas is very serious. Some rough estimate may be formed of it from the diminution in the number of circular notes issued this year. One bank alone estimates that up to now it has issued three thousand notes less than the average of former years. Multiply this by the average amount represented by each note, and again by the number of banks issuing notes, and the total will be a good round sum.

The cholera is not the only deterrent to foreign travel. The fear of quarantine and its discomforts is a greater one even. Those who have had to submit to it are not slow to publish their sufferings in the daily newspapers as a warning to others. Foreign travel has enough discomforts already without this added. The custom-house officers are not usually remembered with kindly feelings by British travellers. Some years ago a relative of the writer's, who was travelling in Italy in medical charge of an English family, had an annoying experience. He carried with him a small medicine-chest. On the frontier the diligence stopped as usual, and the passengers all alighted to have their baggage examined. The medicine-chest was seized. In vain its owner protested it only contained medicines. The officials were inexorable. Finally he asked them to taste the medicines that they might be convinced of their nature. The invitation was not accepted, and the medicines were, after a long parley in the dusty road, finally allowed to pass. Their owner afterward learnt that what he ought to have done was to have given the custom-house officer a "tip" and then he would have had no trouble.

Sir Erasmus Wilson died last week at his residence in Kent. He was born in 1809, and became a member of the College of Surgeons in 1831, and a Fellow in 1843. He originally resolved to be a general surgeon, and became Assistant-Surgeon to St. Bartholomew's Hospital. He was the author of the well-known "Anatomist's Vade-Mecum," which has passed through nearly a dozen editions, the last of which was issued only a few years since. Twenty years ago it was perhaps the most popular anatomical text-book extant, and has sold well down to the present time. Not meeting with a success equal to his wishes in the field of pure surgery, Sir Erasmus (then simply Mr.) Wilson was advised to take up the skin as a specialty. This he did with the determination to succeed. His success was such that his name has become a household word, and his practice literally became enormous. Although married, he had no family, and he gave away a large portion of his earnings. He endowed a chair of pathology in the College of Surgeons (to which he was elected as the first professor), and another quite recently in the University of Aberdeen. The new wing of the Margate Sea Bathing Infirmary was built with a donation presented by Mr. Wilson. His gifts to various charities would take some time to enumerate. I need scarcely remind your readers that he brought Cleopatra's Needle to England, an exploit which cost him ten thousand pounds.

Mr. Wilson never held any skin appointment (except for a short time the purely honorary one of Consulting Surgeon to the St. John's Hospital for Skin Diseases), so his experience was drawn from private practice, but as this was so large he did not feel the want of a hospital clinic. "I see specimens of most varieties of skin dis-

ease *here*," he once remarked to a medical friend, looking round his spacious consulting room. He lived and practised for many years next door to the late Sir Thomas Watson. He was President of the College of Surgeons in 1881, and he received the honor of knighthood in the same year. He lived virtually retired during the last two years of his life at his house at Westgate. He was the author of numerous works on dermatology.

THE MORPHOLOGICAL STATUS OF THE CEREBELLUM.

To the Editor of The Medical Record.

SIR: Permit me to ask your readers not to interpret my silence respecting Dr. Spitzka's letter under the above title (The Medical Record, July 26, 1884) as indicating either that I have abandoned the view attributed to me, or that I am unaffected by the objections so ably advanced by that distinguished anatomist.

I say *the view attributed to me*, because Dr. Spitzka does not refer to the fact that in my discussions of the segmental constitution of the brain (*Science*, March 19, 1881, p. 135; "The Brain of the Cat," "Proceedings Am. Phil. Soc.," August 15, 1881; *Anatomical Technology*, November, 1882, pp. 405, 479, 482; "Cartwright Lectures," several places in Lecture I.) I have *provisionally* followed Von Baer and others in recognizing the existence of two encephalic segments caudad of the "optic lobes."

The matter will be more fully considered in the last part of the third "Cartwright," and forms the subject of a paper entitled "Do the Cerebellum and the Oblongata represent One Encephalic Segment or Two?" for presentation at the coming meeting of the American Association for the Advancement of Science, in Philadelphia. If Dr. Spitzka could attend the meeting, it would not only gratify me but further the solution of a difficult problem. BURT G. WILDER, M.D.

AN UNNOTICED FEATURE OF THE GROSS ANATOMY OF THE FOURTH VENTRICLE.

To the Editor of The Medical Record.

SIR: Observers of cerebral anatomy are familiar with the fine longitudinal striations which appear to pass from the anterior half of the fourth ventricle to the aqueduct, toward which they converge. It is not determined whether they are the result of shrinkage, through the action of hardening fluids; they seem to be most pronounced in those parts of the ventricular parietes where large cavities undergo a sudden contraction in passing into smaller channels, such as the infundibulum and the locality above mentioned. Bergmann gave a special name to those in the latter situation, terming them *Psalterium* and *Organon pneumaticum*. In no treatise, ancient or modern, do I find a very distinct appearance, which I have frequently noted, described. In the lateral angles of the fourth ventricle of a child aged fourteen months I found on either side three button-like elevations, into which the striæ described by Bergmann were continued, just as the stick of a drumstick joins its button-like termination. In another child their existence in the fresh (unhardened) brain was determined. They are paler than the rest of the ventricular flow in chromic acid preparations.

At first I supposed that these elevations were infantile features in the human brain, like the *crista fornicis* of Wilder, which, so far as I am aware, has been identified by that observer only in a child. On examining the fourth ventricle of the negro Jefferson, recently executed in Brooklyn, I found these "hordea," as I propose to designate them, very distinctly marked. On the right side there were two of these prominences, globular, separated by a narrow fissure, the aggregate dimensions being, antero-posteriorly, a little over one-eighth of an inch, each measuring transversely a sixteenth. On the left side there was a single eminence apparently equivalent to a fusion of two such as those on the other side; it resembled a long oval hill, running antero-posteriorly, with its anterior end making a deflection inward. In the several brains in which I have identified these bodies they were all situated directly laterad of the *forea*. In the negro, most of the striæ of the *psalterium* passed laterad of them, along the rising ventricular side-wall to pass into the roof of the ventricle. A few, however, passed toward the hordea, but without as distinctly connecting with them as in the infantile brains. In one of the latter, the three beautifully distinct hordea (resembling, as their name indicates, so many barleycorns) of each side had each a string of the psalter running into them, so as to resemble (as above indicated) three thick-headed drumsticks lying side by side. In several hardened specimens of the adult brain-isthmus I find these bodies to be as distinct as in the negro cited, alcohol specimens, as a rule, showing them less distinctly than such as had been first preserved in acid, chromic salts, or glycerine mixtures.

What the significance of these bodies is, whether they be mere thickenings of the endyma or not, I am unable at present to say. I have identified faint indications of these bodies in the corresponding situation in the sea-lion and found them absent in one monkey (cercopithecus), but not having examined the entire collection with reference to this point, am unable to say anything as to the general absence or presence of the hordea in the animal scale.

I may remark in conclusion, that the general physiognomy—if I may so term it—of the fourth ventricle in the negro referred to, was more infantile than that of any other human brain I have examined. The floor of this cavity in the child is marked by the deep depression of the so-called "fasciculus teres" elevation, the outer borders of the distinct grooves on the outer side rising up very steep. In the adult, ordinarily, the floor becomes generally flatter. The general development of this negro's brain was good. E. C. SPITZKA, M.D.

ENDORSED DIPLOMAS OF THE UNITED STATES MEDICAL COLLEGE.

To the Editor of The Medical Record.

SIR: Inasmuch as numerous inquiries have been addressed to the Board of Censors of the County Society in regard to the endorsement of diplomas by the United States Medical College, we have been advised to answer the following recent inquiries through The Record:

1. Is the Eclectic Medical College of Cincinnati, O., a reputable institution?

2. Is a diploma, issued by the above, and endorsed by R. A. Gunn, legal qualification for the practice of medicine?

If the writer refers to the Eclectic Medical *Institute* of Cincinnati, it is a reputable school and the diplomas are recognized by the Illinois State Board of Health, provided the graduate presents a written statement from the dean that he has studied medicine three years, and taken two full courses of twenty weeks each, extending over a period of sixteen months. The natural inference from this condition is that diplomas have been issued from said college to persons who have not met these requirements, but that the present management is entitled to confidence. The Court of Appeals has declared that the United States Medical College was illegally incorporated, and such disability never having been removed by subsequent legislation, every diploma issued, and every endorsement by R. A. Gunn as dean became null and void. As a measure of relief to the innocent victims of this now defunct institution, the Legislature last winter passed an act legalizing the diplomas issued by the United States College *prior* to the beginning of proceedings against it, April 21, 1883, provided the holders of said

diplomas had attended the required courses of lectures, passed a satisfactory examination, and been regularly graduated, in other words had not secured a diploma by the disreputable means believed to have been practised in some instances.

Very respectfully,

DANIEL LEWIS, M.D.,
Chairman of Board of Censors.

ELECTROLYSIS IN STRICTURE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Allow me a few words in reply to a criticism in the last RECORD of my article on the above subject by Dr. Meier. I do not propose to enter into any controversy upon this subject, and this will close the discussion on my part For it is apparent from the doctor's attempted contradiction of my position, that, in the words of a distinguished surgeon, "it is useless to argue with men who persist in making statements in direct opposition to those who are known to have the largest opportunities for scientific investigation and experience."

I claimed that it is impossible to cure organic stricture by the method of which we have heard considerable in the last few years, namely, the application of electric currents so weak as to be scarcely felt. That it was not to be expected from our knowledge of the laws of electro-therapeutics, and was not endorsed by the standard authorities. My "arbitrary dictum," as the doctor terms it, is based upon nearly twenty years' experience in the study and treatment of strictures and in the use of electricity. Any one can read the authorities for themselves. Sir Henry Thompson, Surgeon to University College Hospital, London, and Fessenden N. Otis, Professor of Genito-Urinary Diseases in the College of Physicians and Surgeons, and Surgeon to Charity Hospital, New York, authors of the most classical works upon stricture which have ever been written, and who have probably had the largest experience in this line of any men who ever lived, totally ignore electrolysis. "Althaus," the great English authority on electricity, and "Beard and Rockwell," the American, speak in very guarded and not favorable terms of the remedy. And so one might go through nearly the whole list of standard writers, college professors, and hospital surgeons who have had the greatest opportunities for studying and experimenting. Their ability or honesty cannot be questioned; their position certifies to the one, and their character, writings, and the absence of biasing motives to the other. The doctor claims that analogous conditions in other parts are cured in this way. The above remarks apply equally to this statement also. S. W. Gross, Professor of Surgery in the Jefferson Medical College, Philadelphia, in a recent elaborate article in the *American Journal of the Medical Sciences* on the "Treatment of Stricture of the Œsophagus," does not even mention electricity. And yet my critic has the assurance to deny all this and claim that the writer, and if him then all who agree with him, which embraces the great mass of the profession, are not sufficiently skilful to follow the directions laid down by the advocates of this method. But that the method itself is all right is not proven because a certain doctor does succeed with it anyhow, no matter whether any one else does or not.

In support of his statements he quotes a few of the reports of the remarkable effects of electricity which have appeared in the journals. All have heard this same kind of argument before, can weigh the evidence of both sides, make the "experimentum crucis" for themselves, and draw their own conclusions. My experience with dilatation, divulsion, electrolysis, and dilating urethrotomy, leads me to believe that very few cases of stricture are permanently cured, except by tearing (divulsion) or cutting; and the former process has generally been abandoned as having no advantages and some disadvantages compared with the cutting operation. Nearly every stricture of the straight urethra should be, and can be cured permanently by cutting. An external constricting band or a contracted meatus is cut unhesitatingly. By putting the urethra on the stretch by the urethrotome an internal one is cut with nearly equal facility with little or no pain and with almost perfect safety. "Operations confined to the straight urethra are *as a rule* never followed by constitutional disturbance," but no instruments should be passed into the bladder at the same time, for the passage of a sound not unfrequently causes chills and other constitutional effects. The rationale of cure is by relieving spasm and congestion, which must exist more or less about every stricture, to promote a healthy circulation and absorption of the deposit. Over 1,100 cases without a death, and with only a very few cases of urethral fever, serious hemorrhage, or inflammation, and these few in operations on the deep urethra, are reported in Otis' work. It is not until we pass around the pubic curve that trouble usually begins. Fortunately the great majority of cases are in the straight urethra, slight contractions of which the only symptom is gleet, with more or less spasmodic contractions deeper. "These cases are of daily occurrence and often pass unrecognized, the gleet being treated, the stricture overlooked. Too much stress cannot be laid upon the importance of exploring the urethra in every such case, and if the slightest obstruction is found, removing it."

H. W. STREETER, M.D.
104 WEST MAIN STREET, ROCHESTER, N. Y.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August 17 to August 23, 1884.

CRAMPTON, LOUIS W., Captain and Assistant Surgeon. To report at Creedmoor (L. I.), N. Y., not later than August 30th, as competitor; and in addition thereto, as medical officer of the detachment of competitors. S. O. 41, Division of the Atlantic, August 20, 1884.

COCHRAN, J. J., First Lieutenant and Assistant Surgeon. Assigned to duty at the Presidio of San Francisco, Cal. S. O. 81, Division of the Pacific, August 16, 1884.

BIRMINGHAM, H. P., First Lieutenant and Assistant Surgeon. Granted one month's leave of absence. S. O. 162, Department of the Missouri, August 12, 1884.

WILSON, GEORGE F., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Walla Walla, Wash. Terr., and to take station at Vancouver Barracks, Wash. Terr. S. O. 120, Department of the Columbia, August 13, 1884.

FISHER, W. W. R., First Lieutenant and Assistant Surgeon. When relieved by Assistant Surgeon Cochran, to report in person to Commanding General, Department of Arizona, for assignment to duty in that department. S. O. 81, C. S., Division of the Pacific.

WOODWARD, J. J., Major and Surgeon. Died, August 17, 1884.

Official List of Changes in the Medical Corps of the U. S. Navy, during the week ending August 23, 1884.

RIXEY, P. M., Passed Assistant Surgeon. Orders to U. S. S. Lancaster revoked. To continue on special duty.

MARTIN, C., Medical Director. To be retired August 21, 1884.

HEYL, T. C., Surgeon. Detached from U. S. S. Independence, ordered to U. S. S. Adams.

AYERS, J. G., Surgeon. Detached from U. S. S. Adams, placed on waiting orders.

CURTIS, L. W., Assistant Surgeon. Detached from U. S. S. Adams, placed on waiting orders.

STEPHENSON, F. B., Passed Assistant Surgeon. Detached from Navy Yard, New York, ordered to C. S. S. Bache.

DERR, E. Z., Passed Assistant Surgeon. Detached from C. S. S. Bache, placed on waiting orders.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending August 23, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
August 16, 1884	2	30	34	2	52	24	0	0
August 23, 1884	0	26	32	1	50	22	0	0
Deaths.								
August 16, 1884	0	3	2	2	7	12	0	0
August 23, 1884	1	16	5	1	10	11	0	0

THE VAGARIES OF A NEEDLE.—Under the above head Dr. John Burke, of this city, writes: "Miss A——, seventeen years of age, came to my office last October suffering from an abscess behind her right ear, over mastoid process. She had this trouble for four years, and for ten years she had a discharge from her ear, sometimes fetid and sometimes not. She was also partially deaf in that ear. Her mother had tried many ear surgeons, but the discharge from the ear and the deafness continued. Now, the abscess had two openings, one above and the other directly below, about one inch apart. Under ether I laid open the parts to the bone. There was no necrosis. Next day a poultice of flax-seed meal was applied. In three days a common sewing-needle came out of the wound, not much rusted. History: Ten years ago the child, being seven years of age, was playing with a needle in her mouth; it was swallowed. It caused some strangulation. It could not be found by the doctors who examined the throat. About four months afterward the child was taken with pain in the ear and otorrhœa, which, notwithstanding good surgical treatment, continued for ten years. For four years she suffered with an abscess over mastoid process, sometimes healing, and then suddenly breaking out. On March 1st the needle came out. Since then the abscess has healed, the discharge from the ear has ceased, and the patient can hear very fairly in the ear, but not as well as in the other side. But all pain and tenderness has gone."

OVARIOTOMY IN THE CORPULENT; OVARIAN CYST IN A WOMAN AGED NINETY.—Dr. W. P. Giddings, of Gardiner, Me., sends us the following instructive histories: "On June 26, 1882, I removed from Mrs. S——, twenty-six years of age, an ovarian multilocular cyst, weighing with its contents fifty pounds. She had been tapped four times, the last two by myself, removing respectively 33 and 35 pounds. The abdomen was excessively pendulous, and after closing the wound there was a very deep sulcus into which I judge a pint of fluid might have been poured and retained. Desiring to avoid the retention and burrowing of pus about the wound, I placed adhesive strips to within half an inch of the wound and drew them around toward the spine, then crossed the wound with adhesive straps supporting it in the usual way. I had the cicatrix thus supported for several months, reinforced by the bandage. Recovery was uninterrupted, and there was gradual retraction of skin and muscles to a normal state. On June 16th of the present year, I delivered the lady of a fine healthy boy of 10 pounds weight, and found the cicatrix of wound had not yielded in the slightest degree, and during labor there seemed to be as much force exercised by the muscles as is usual. Convalescence rapid and complete. Case 2: Mrs. A——, ninety years of age, had for eighteen months noticed a gradual enlargement of abdomen, and for some few months œdema of feet and limbs, which had greatly increased, rendering locomotion impossible, and confining her to bed. To add to her discomfort, profuse salivation had come on, preventing her taking food or getting sleep. General dropsy had been diagnosed, and I was called in consultation. There had been at times during the past few months quite a "show." I instituted a careful examination and diagnosed ovarian cyst of left side with thin fluid. The case was frankly stated and tapping advised, her extreme age forbidding the thought of a radical operation. The old lady, unusually intelligent, with faculties remarkably well preserved, submitted at once to the operation, remarking during it, "Doctor, I enjoy seeing that fluid run; surgery has advanced since I was a girl." This was done April 10, 1884. At present writing she is well and hearty, though the cyst is gradually filling. Who has seen so old a person develop an ovarian tumor?"

A NEW, SUCCESSFUL, AND PALATABLE MEDICINE FOR THE TREATMENT OF TAPE-WORM.—Under the above title Dr. Howard Pinkney, writing from Sharon Springs, describes his experience with the oil of the pine needle, made from the *pinus punilio*. A hall-boy of the hotel had suffered for five years from tape-worm. He had been treated for four years in New York, but never had succeeded in getting rid of over four feet of links at a time. Dr. Pinkney not being able to get any male fern, pelletierine, or pumpkin seeds, therefore tried the following experiment: "The patient fasted from breakfast, and at nine P.M. he was given one teaspoonful of oil of the pine needle in half a glass of milk. The following morning, as there was no perceptible action of the medicine, the dose was doubled. This, the boy said, had a most agreeable taste. One hour later he took a dose of castor oil, and in the course of two hours after this he passed an entire tænia solium measuring fifteen feet six inches in length and one-half inch at its broadest part, gradually tapering down to almost a thread. To be positive that none remained behind, he was given two teaspoonfuls more, but no sign of any worm or part thereof passed. This oil," writes Dr. Pinkney, "contains no turpentine, is fragrant in its odor, and when mixed with milk very agreeable to the taste. It produces no strangury, tenesmus, or other unpleasant or distressing symptoms. The patient can generally pursue his ordinary avocation." Our correspondent would be pleased to know if any of our readers have ever read or known of its use in similar cases.

THE CHOLERA GERM AND ITS DESTRUCTION.—Dr. Koch has found large numbers of different kinds of germs in the intestines and discharges of cholera patients, and among them one almost new kind which seems peculiar to cholera. This form, which was not round, or dot-like, nor rod-shaped, had been previously noticed and described by Dr. Bristowe, of England, a well known medical author, as early as 1867. Other more common forms of germs were found in the dejecta and intestines by Bohm as early as 1838. Round or dot-like bodies were detected by Brittain and Swayne in Bristol, England, in 1849, and confirmed by Hugh Bennett, of Edinburgh. Pouchet, Davaine, and Paccini saw them again in 1854 and 1856. Dundas Thompson and Dr. Hassell, quoted in the United States Cholera Report for 1873, also wrote about them in 1854, and stated that they thrived most in warm alkaline fluids, when contaminated with organic matter in a state of decomposition. The rice-water discharges of cholera were found to be alkaline and very prone to putrefaction, and acids were first suggested as germicides and as curative remedies for cholera. In

1866 Dr. MacNamara, one of the very best writers on cholera, noticed the same things and was inclined to believe that the cholera germs died naturally in about three days. In 1872, Nedwetsky, also quoted in the United States Cholera Report for 1873, p. 32, gave us still more positive information. He put ten grains of quinine in two teaspoonfuls of rice-water discharges which were swarming with germs, and they were not only alive on the second and third days, but by the fifth day large masses, or new colonies of them, had formed. He then put thirty grains of camphor in two teaspoonfuls of rice-water cholera discharges and found that the germs lived and thrived. Next he put five drops of strong carbolic acid in two teaspoonfuls of rice-water discharges, but the germs remained alive and active. On the fifth day he added five drops more of carbolic acid but did not kill the germs. Then he put first one teaspoonful and then two teaspoonfuls of tar in two teaspoonfuls of rice-water discharges, but the germs continued to live, move and thrive. Then he put ten grains of calomel in two teaspoonfuls of rice-water discharges, but the germs continued to live and move among the particles of calomel which had settled at the bottom of the glass; and by the fifth or sixth day great numbers and masses of new germs had formed. Then he put one teaspoonful of laudanum in two teaspoonfuls of rice-water discharges, but the germs were alive on the second and third days, and on the sixth day only a few of them were benumbed. Next he put one teaspoonful of tincture of nux vomica in two teaspoonfuls of rice-water discharges, but most of the germs lived up to the tenth day, and then only a portion of them were dead and motionless. One teaspoonful of chloral was put in two teaspoonfuls of rice-water discharges, but the germs were not killed.

If there is any value in such careful and ingenious experiments they seem to prove that all these powerful remedies are useless in cholera. Nedwetsky was inclined to believe that they might be useful in cholera morbus and other allied diseases, and as one-half of the cases of real cholera recover, that they had obtained a fictitious reputation. He was destined to be more successful with other remedies. He put ten grains only of tannin or tannic acid in two teaspoonfuls of rice-water discharges, and in two hours an innumerable number of germs were found without life or motion. None of them came to life again up to the tenth day, even after they were put in distilled water to revive them. Dilute sulphuric and nitric acids, made by putting twenty drops of the strong acids in an ounce of water, and adding two teaspoonfuls of this to two teaspoonfuls of rice-water discharges, killed the germs at once. Very dilute muriatic acid, made by putting three drops only of the strong acid in six ounces, or nearly half a pint of water, killed the majority of the germs. Chlorine water killed the germs at once. Sulphate of iron in concentrated solution also killed the germs, and chloroform also. It is now claimed that all these germs were merely common germs or bacteria such as cause ordinary putrefaction. But all the rice-water discharges were taken from well-marked cholera cases which had been attended by Nedwetsky and the others during life and examined after death. We have apparently gained fixed points in the treatment of Asiatic cholera, which some are not willing to surrender. Healthy acid gastric juice will destroy the germs of cholera, and if sufficient of it be present in the stomach, rice-water cholera discharges may be, or at least have been, swallowed with impunity. In a jail in India some experiments were being carried on; rice-water discharges were put in a very large glass of water; nineteen convicts accidentally drank of this; in consequence four or five weak and dyspeptic patients died of cholera and the rest all escaped without a sign of disease. Muriatic acid is the base of the acidity of the gastric juice, and common table salt is a muriate of soda or a combination of muriatic acid and soda. Sulphuric acid has a well-established reputation in the treatment of cholera. Koch has added alum, which is a sulphate of alumina that kills his germs in a one per cent. solution. There is no harm in adding a little sulphate of morphine to these remedies, for opium has much palliative, if not curative, influence over cholera. Sulphate of copper is suggested by Koch, who says it will kill his germs in the very dilute solution of one part to 2,500 of water. And corrosive sublimate in the proportion of one to 20,000. But the great difficulty in the treatment of cholera lies in the fact that huge quantities of alkaline fluids are poured out into the stomach and bowels; these have to be measured by quarts or gallons rather than by pints or ounces, and all has not only to be neutralized but rendered acid before the germicides will act. If it takes ten drops of dilute sulphuric acid to kill the germs in two teaspoonfuls of rice-water discharges, how much will it require to deal with quarts at least: it would seem that rather large doses frequently repeated are required; and we can judge of the frequency of the repetition of the doses by the use of litmus paper to the discharges; when these become acid the doses may be lessened. And now would also be the time to try the more powerful remedies, viz., sulphate of copper and corrosive sublimate, if any one wishes to do it; they will be inoperative, though alkaline fluids. Lemon juice and vinegar have always been forbidden in cholera, but acetic acid, the basis of vinegar, is an efficient remedy.

Rectal Etherization.—Dr. O. Wanscher writes in the Copenhagen *Hospitals-Tidende*, of May 28, 1884, giving an account of the history of rectal etherization and of the advantages and disadvantages of this method. He states that in 1847, immediately upon the introduction of anæsthesia for surgical operations, Pirogoff conceived the idea of administering ether for this purpose by the rectum. Magendie's experiments upon animals, however, demonstrated the danger of injecting fluid ether into the rectum, many of the animals so treated passing into a state of dangerous or even fatal collapse, and Pirogoff was therefore led to experiment with the vapor of ether passed into the bowels. The method was described by him in a pamphlet published in St. Petersburg in 1847, entitled "Recherches sur l'étherisation," and also by Ekstromer who recommended its employment instead of tobacco clysters in the treatment of incarcerated hernia. The latter used it also with success for the relief of renal colic. But upon the introduction of chloroform, Pirogoff, together with most of the European surgeons abandoned ether, and then rectal anæsthesia passed into oblivion. The method was revived again by Wanscher, who published an article on the subject in the *Hospitals-Tidende* in 1882. The apparatus used by him, which is nearly identical with that of Pirogoff, consists of a bottle to which is attached a flexible tube about two yards in length, and provided at the other extremity with a nozzle with a stop-cock attachment. At the end near the nozzle the tube passes through a flask in which it is looped several times. The bottle is placed in a vessel of hot water, and the flask is also filled with hot water in order to prevent any condensation of the vaporized ether before it enters the rectum. By means of the stop-cock it is possible to administer or withhold the anæsthetic at pleasure, without withdrawing the tube. Dr. Wanscher has induced anæsthesia by this method successfully in a number of cases, especially in operations about the head and neck, and when openings were to be made into the thoracic cavity for the evacuation of the fluid in empyema.

A Genius to Fail.—Speaking of the causes of failure in life, Tourgee says: "Trying to carry too big a load. I don't know about a professional man's failing if he works, keeps sober, and sleeps at home. Lawyers, ministers, and doctors live on the sins of the people, and, of course, grow fat under reasonable exertion, unless competition is too great. It requires real genius to fail in either of these walks of life."

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THE MEDICAL HISTORY OF THE CASES OF THE SURVIVORS OF THE LADY FRANKLIN BAY EXPEDITION.

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PASSED ASSISTANT SURGEON U.S.N.

As a preliminary to a medical history of the cases of the survivors of the Lady Franklin Bay Expedition, it is well to give a brief résumé of their mode of life at Camp Clay, their quarters, rations, etc., so as to better appreciate the condition in which they were found.

On September 29, 1883, Lieutenant Greely landed with his party at Baird Inlet after thirty days' exposure, drifting on an ice-floe; the record left at that time stated the *party was all well.* Having sent an advance detachment ahead, it was found and reported that a cache of provisions existed at Cape Sabine (fifteen miles further to the northward than he was at this time). It was deemed expedient to move the whole command up to that neighborhood rather than send for the provisions and winter at Baird Inlet. Finally, on October 25th, they moved around to a point between Cape Sabine and "Cocked Hat Island," lat. 78° 45′ N., long. 74° 15′ W. The site of their winter quarters was sheltered between high ridges of mountains, which screened them in a measure from the northerly and southerly winds. A glacier was situated at the foot of the mountain, on either side of them, about a mile distant. They constructed a house of loose rocks and moss, the walls being 3 feet in thickness. The roofing consisted of old canvas stretched over a boat. The dimensions of the house were 25 feet long by 17 feet wide by 4 feet high, making the cubic air space 1,700 feet. In this the twenty-five members of the party lived all winter, having a cubic air allowance of about seventy feet for each man. The whole party could barely squeeze in and lie at length, two or three being obliged to occupy the same sleeping-bag. The effects of this diminished air space will be seen later on. Their hut was but 100 yards removed from the ice-foot of the Sound, and 200 yards to the south of them was an artificial lake, from which they drew their water-supply by melting up ice. As the sea-water strained into this lake, they were drinking brackish water all the while.

On November 1st Lieutenant Greely took a careful account of his stock of provisions, and found there was but a whole ration for each man (estimated as an army ration, about forty-six ounces solid food per diem) for forty days. Dr. Pavy and he advised together, and it was with some reluctance that they determined to divide up the rations so as to make them last until March 1st, putting aside from time to time so that at the end they would still have ten days' supplies left with which to attempt the trip to Littleton Island, if the Straits were frozen over. Dr. Pavy did not think the party could exist on the ration during the winter; but the common voice was to make it go as far as it would, so each man was given the following daily allowance: Meat and blubber, 4.33 ounces; bread and dog-biscuit, 6.5 ounces; canned vegetables and rice, 1.40 ounce; butter and lard, 0.75 ounce; soup and beef extract, 0.90 ounce; berries, pickles, raisins, and milk, 1 ounce, making the daily allowance for the four months 14.88 ounces. During the winter the following amount of game was secured, which added to their stores: two seals, yielding about 120 pounds of meat; one bear, yielding 300 pounds of meat; eight foxes, 4 pounds each; and sixty dovekies (Uria brunnichii), a small bird weighing about a pound.

March 1st.—Found the party intact with the exception of Sergeant Cross, who died in January with well-marked scorbutic symptoms, the only case of pronounced scurvy that developed; and Hans, their Eskimo hunter, who was lost in his boat while hunting seals early in February. The Straits having been kept open during the winter by a succession of violent gales, the attempt to cross to Littleton Island had to be abandoned, and their ration was still further reduced to the following allowance: meat 6.8 ounces; bread and dog-biscuit 3.2 ounces, the rest of their stores being exhausted. The stores were divided up so as to last until May 12th. The sun had returned by this time, after an absence of one hundred and twenty-eight days, and those employed as hunters caught the sea-fleas or shrimp, a small crustacea ½ to ¼ in. long, consisting of about four-fifths shell and one-fifth meat. From 1 to 3 ounces of these a day—according to the catch—were allowed in addition to the ration. After the last reduction the party began to weaken and die off rapidly. About March 24th the whole party was overcome with asphyxia, and nearly lost their lives, owing to the atmosphere being surcharged with carbonic acid; they had lit their alcohol stove in the hut to cook a meal, without previously having removed the rags from the vent-hole in the roof. The remaining oxygen of the air was soon consumed by the stove, and the whole party were seized with faintness, vertigo, and dyspnœa. It was with the greatest difficulty they struggled from their sleeping-bags, and stumbled and were helped into the open air, many fainting away and dropping unconsciously after reaching the open. Being poorly clad for a temperature such as prevailed outside at the time (—46° F.), many were frostbitten. The after-effects of this mishap remained for a long time and weakened many of them. After May 12th everything like a regular ration was exhausted, and they struggled on as best they could, catching the shrimp (which they boiled) gathering reindeer moss, which when boiled yields a mucilage (similar to Iceland moss), and boiling up the seal-skin linings of their sleeping-bags (from which a gelatinous mass was extracted). It was not until they had exhausted the supply of moss around the camp that they gathered the black lichen (crêpe de la roche) growing on the rocks and boiled that. Dr. Pavy spoke strongly against its use, as he had the authority of Kane and Hayes that when eaten it would produce a diarrhœa, which, in their weakened condition, would be fatal. They had no fuel for artificial warmth, and barely sufficient to allow for melting the ice for procuring drinking-water, and to cook a meal every other day, so that the living temperature of the hut for the winter was from 5° to 10° F.

They recognized the fact that the nearest they could approach a state of hibernation the better were their chances of getting through. Only those employed as cooks and hunters exerted themselves much, and they were given a double ration. The rest of them occupied their sleeping-bags and slept sixteen to eighteen hours out of the twenty-four. In answer to complaints of hunger Dr. Pavy's motto was, "qui dort dine," which was philosophical without being filling.

There seemed to be but little acute suffering from the lack of food, it was only after the introduction of food into the stomach that the craving became great; for

days they went without food without actually suffering. The deaths seemed to take place finally from heart trouble (hydrops pericardii); the feet and face became œdematous; for a day or so they would complain of pains over the heart, have a spasm of pain over præcordia, a slight general convulsion, and all would be over. Their chief suffering during the winter was from constipation; many went eight to ten days without a stool, and one as long as sixteen days. The fæces became so hardened and impacted in the rectum that at each operation they were obliged to dig them out with their fingers, the abdominal muscles being too weak to extrude the mass; nearly every one would faint, after having a stool, of sheer exhaustion.

When it is considered that for nine months they were on the ration as detailed, had nothing but brackish water to drink, no artificial warmth, living in a temperature of five to ten degrees for the winter, with a cubic air space of seventy feet per man, the condition in which the survivors were found will not be wondered at. There were but seven out of the twenty-five found alive. These were A. W. Greely, first lieutenant, U.S.A.; Henry Beiderlick, hospital steward; D. L. Brainard, sergeant, U.S.A.; Thomas Connell, private, U.S.A.; Joseph Ellison, sergeant, U.S.A.; Julius Frederick, sergeant, U.S.A.; Francis Long, sergeant, U.S.A. The four first mentioned were taken on board the flagship Thetis and placed under my care, and with them this paper will principally be concerned.

On landing at the camp, the condition of the party was so desperate that a delay of two hours was necessary to restore them sufficiently to permit their being removed on stretchers to the boats and taken off to the ships. Thomas Connell, private, was in extremis, was pulseless, unconscious, and unable to swallow; limbs cold and respirations barely noticeable. Auscultating over the heart, the sounds were heard very indistinctly by propping him up; forcing open the jaws, a teaspoonful of brandy was slowly poured into the back of the throat. The effect of the stimulant was soon noticeable, as a faint pulse appeared at the wrist; in ten minutes he could make an effort to swallow, when more brandy was adminstered, followed by some warm condensed milk at intervals. The rest of the party were served with brandy, milk, and beef essence, and finally transported to the ships.

The time and space would hardly be allowed me to give more than a brief detail of the cases, and as they closely resembled each other, both in symptoms and treatment, I will confine myself to the case of Lieutenant A. W. Greely more particularly, alluding to anything peculiar in the other cases.

June 22d, 11 P.M.—A. W. Greely, lieutenant, U.S.A., aged forty. Disease asthenia; on admission fainted after being carried below in the ward-room and vomited; administered ammonia spts. aromat. 6 c.c., renewed in ten minutes; placed in the berth; given a teaspoonful of raw, fresh beef, minced; clothes were carefully cut off of him and heavy red flannels, previously warmed, substituted.

On examination his body emitted a sickly offensive odor (as of stale urine); emaciated to a degree. Skin hanging from limbs in flaps; face, hands, and scalp blackened with thick crust of soot and dirt (had not washed or changed clothing for ten months). Nervous system: excitable and irritable; at times almost irrational; eyes wild and staring; insists on talking, craving news, and demanding food; complains of no pain. Digestive system: tongue dry and cracked, heavy brownish-black coat; ravenously hungry; abdominal cavity hollow and lying almost in contact with vertebral column; no movement of bowels for six days; liver dulness; on percussion confined to right hypochondriac region. Respiratory system: respirations 12 per minute; auscultation and percussion reveal no abnormal condition of lungs; vesicular murmur puerile. Circulatory system: pulse 52, soft or compressible; auscultation shows marked murmur (blowing) in systole over base of heart. Integumentary system: skin cold and clammy, sickly odor emanating from it, shrivelled and sallow; temperature 97.2° (under tongue). Locomotor system: great muscular waste; unable to move or stand without support; body weight 120 pounds; weight before leaving Fort Conger in August, 1883, 168 pounds. Urinary system: no specimen obtainable. Treatment: From 11 P.M. till 8 A.M., alternated every half hour, teaspoonful of raw, fresh beef (minced) with teaspoonful of milk punch; enjoined strict quiet; pulse then rose to 60 per minute, soft; temperature 97°.

June 23d.—Nervous system: mind still active and restless, compelled to allow him some home letters to read, after which became more composed; has not closed his eyes; talks rationally, but shows loss of memory, as often repeats himself. Digestive system: had a small highly offensive stool; felt quite faint; afterward passed considerable wind from bowels; abdomen tympanitic; tongue still dry and coated. Circulatory system: pulse slightly stronger, 60 per minute; respiration 12 per minute. Integumentary system: same offensive odor; temperature, A.M., 97.8°; P.M., 98°. Locomotor system: still unable to rise up without help; muscles very soft and flabby; some stiffness and pain in the joints. Urinary system: urine passed in twenty-four hours, 1,630 c.c., specific gravity 1.014; acid, highly albuminous ($\frac{1}{10}$ tube). Treatment: Continue raw fresh beef at intervals of an hour, with a raw onion, finely cut up, added; also, milk punch, half an ounce every two hours; no medication.

June 24th.—No sleep; mind more tranquil, but too active; great desire to talk and read; less persistent in demanding food; complains of soreness in limbs; tongue presents a moister appearance; bowels slightly distended with gas; no stool; pulse, 62°, not so thready; heart sounds stronger; still a pronounced anæmic murmur. Blood examined microscopically shows large increase of white corpuscles; at first the field ($\frac{1}{10}$ objective) appeared filled with the nucleated corpuscles; close examination showed the proportion to be about one to twenty red; the red corpuscles show but little disposition to cohere and run into "rouleaux," and lacked the distinctive biconcave disk shape; edges full and round (not ragged). Urine passed in twenty-four hours, 1,660 c.c., highly albuminous; no casts revealed by microscope; skin clammy, dirty mottled yellow. Temperature, A.M., 97.6°; P.M., 98°; muscles sore; slight œdema of hands and ankles. Treatment: Sponging with tepid water, afterward briskly rubbed with flannels, and a little lin. sapo. Small quantity of oatmeal (thoroughly boiled), four ounces allowed in morning; beef essence, Liebig's, one drachm in hot water every four hours. Continue scraped beef and onion; no medication.

June 25th.—Marked improvement; mind more tranquil; talks quietly without excitement; slept two or three hours naturally, awoke refreshed. Tongue beginning to clean; had a large dark semi-solid stool; odor offensive in the extreme, evidently but little biliary secretion poured into alimentary canal. Pulse, 65°; some strength; respiration, 14°, principally costal; skin losing clammy feel; emanation still sour and offensive from it. Temperature, A.M., 98.2°; P.M., 98°; muscles sore, ankles puffed. Treatment: Shampooing muscles with dry cloths; no change in diet; no medication.

June 26th.—Allowed to sit up in bed and read a little; slept six hours soundly during the night; mind tranquil; has a loss of memory of words; tongue cleaning, still a heavy coat at the back; bowels moved twice; stools pitchy and offensive; abdomen tympanitic, considerable borborygmus; pulse, 65; heart sounds stronger; murmurs still pronounced; urine passed in twenty-four hours, 1,800 c.c.; specific gravity, 1016; albumen not decreased; no change in condition of skin. Temperature, A.M., 98°; P.M., 98.8°. Treatment: Sponging and friction. Same dietary with tr. ferri muriat., 5 c.c. t. i. d.

June 27th.—Still extremely weak; voice stronger; mind easier; amnesic aphasia marked; appetite still morbid, always hungry; considerable flatulency; no stool; aspect of skin somewhat improved in appearance; still dirty yellow (in spots). Temperature, A.M., 98.4°; P.M., 98.8°; pulse, 66; respiration, 14; urine albuminous (⅛ tube), 1,950 c.c. in twenty-four hours; specific gravity, 1.018; muscles beginning to fill out; very soft. Treatment: Dietary increased to eight ounces broiled steak in morning; continued ferri muriat.

June 28th.—Gaining strength; dressed and sat up for a couple of hours, then felt exhausted and returned to bed; mind quite tranquil; slept well; appetite still morbid; bowels moved; no change in character of stool; liver still inactive. Pulse, 66; fairly good tone. Anæmic murmur not so marked. Temperature, A.M., 98.2°; P.M., 98°. Urine passed in twenty-four hours, 1,860 c.c.; specific gravity, 1.018; albumen present. Treatment: Takes food at five stated intervals: 6 A.M., oatmeal, 4 ounces, broiled steak, 8 ounces; 10 A.M., Liebig's beef essence, 1 drachm in teacup of warm water; 2 P.M., one soft-boiled egg with milk toast; 6 P.M., raw minced beef and onion; 10 P.M., Liebig's essence of beef. Continue tr. ferri muriat., 6 c.c., t. i. d.

June 29th.—Dressed and assisted to walk in ward-room a few steps; muscles soft; very weak; limbs filling out; body weight, 129½ pounds (gain of 9½ pounds for the week). Pulse, 68. Urine, 1.650 c.c. in twenty-four hours; albumen less. Temperature, A.M. and P.M., normal. Bowels moved naturally; stool still pitchy and offensive. Treatment: Continue the same.

June 30th.—Sleeps naturally and awakes refreshed; allowed to read and talk; walks around for an hour or so with support; limbs filling out; feet œdematous toward night. Appetite still morbid, unable to be satisfied with his allowance; good movement of bowels; albumen disappearing; heart sounds stronger. Temperature normal. Continue restricted diet and iron.

July 1st.—Felt quite refreshed on awaking; had slept well during the night; enjoyed morning meal, and ate without asking for more. As the sun was shining brightly, was assisted on deck and sat in the air (well bundled up) for an hour. Had but little appetite for mid-day meal. At 4 P.M. a small, dark, offensive stool; strained considerably and was much exhausted afterward (nearly fainted); administered spts. frumenti, ℥ ss. in aqua. At 6 P.M. complained of severe pains in abdominal muscles and over the region of the liver (pains resembling hepatic colic); considerable febrile disturbance. Pulse, 98. Temperature, 100.2°. Administered quin. sulph., 3 c.c., at 8 P.M.

July 2d.—Feels much prostrated and weak; muscular pains and soreness over abdomen and back. Complexion sallow; appetite poor. Temperature, 8 A.M., 98.8°; 12 M., 99°; 4 P. M., 99.2°. Exhibited hydrarg. chlorid. nit., 3 c.c. at 8 A.M., repeated dose at 2 P. M. Bowels moved three times, last evacuation watery. Felt weak, but free of cramps; headache disappeared. Light diet of oatmeal and milk. Discontinued tr. ferri muriat.

July 3d.—Still weak; muscular soreness over abdomen; no sharp pains; two loose evacuations from bowels. Appetite returning. Pulse, 68. Temperature normal. Whiskey toddy, ℥ ss. t. i. d.

July 4th.—Considerable improvement; pains have disappeared from muscles, tongue cleaner, complexion better. Allowed to sit up to his meals. Urine much improved; albumen (⅛ tube); specific gravity 1.022. Resume tr. ferri muriat., also vin. Portense, ℥ j., t. i. d. before meals.

July 5th.—Gaining strength gradually; muscles soft; knees weak; encouraged to take some exercise daily, weather permitting, in the open air. Digestion good; appetite under better control; liver still torpid; regular movement of bowels; skin clearing, lost clamminess; sleeps well. Continue same. From this time forth gradual improvement. Blood again examined microscopically shows marked diminution of white corpuscles.

On July 8th, no albumen found in urine. On July 12th, anæmic murmur very indistinct. On July 17th arrived at St. Johns. Condition sufficiently improved to warrant his going ashore for exercise; muscles still weak and sore; filled out rapidly.

July 19th.—Had a slight attack of intestinal indigestion; was living ashore at the consul's and committed an error in diet; suffered for two days.

July 25th.—Allowed to eat three full meals daily, with certain articles restricted; encouraged to exercise in open air. On the trip from St. Johns to Portsmouth, N. H. (July 26th to August 1st), ran into damp, moist weather; felt much prostrated, and muscles ached. Given quin. sulph., 18 c.c., every night during the run. On being transferred at Portsmouth, his body weight was 169 pounds, representing a gain of 49 pounds in six weeks—9½ pounds first week, 15 pounds second week, 8 pounds third week, 7 pounds fourth week, 5½ pounds fifth week, 4 pounds sixth week.

Remarks.—Vital depression, as exhibited by the temperature, not marked; digestion fairly good all the time; nervous system soon calmed. Microscopic examination of blood disappointing; exhibiting no unhealthy character of red blood-globules. Albumen disappearing. Anæmic murmur disappearing, showing it to be simply due to hydræmic condition of blood; liver not secreting. Large gain in weight, due to rapid assimilation of food, owing to a great muscular waste. Large urinary excretion (1,950 c.c. in one day), due doubtless to almost total inactivity of sudorific glands.

TREATMENT OF CHOLERA IN INDIA.

By H. MARTYN SCUDDER, M.D.,

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For purposes of treatment I would divide the course of this disease into the following stages: A period of prodromes or prodromic stage; a first stage, or state of diarrhœa or chlorine; a second stage, or stage of invasion; a third stage, or stage of collapse (algid stage); a fourth stage, or stage of reaction. This last stage of reaction may be succeeded by a typhoid condition, or cholera typhoid stage, or else may pass directly into a state of convalescence. In the prodromic stage, manifested by lassitude, mental depression, chilliness, nausea, and abdominal discomfort, give ten or fifteen drops of spirits of camphor in dessert-spoonfuls of hot brandy every hour or two, but be careful not to allow any considerable quantity of stimulants to be taken. When epidemic cholera is prevalent many are affected by the symptoms just described. If the remedies I have indicated are promptly taken, I feel confident many attacks of cholera will be warded off. It is true that fear often produces these very symptoms, but the spirits of camphor in spoonfuls of warm brandy tends to soothe the fears and dissipate these symptoms, and yet does not usually disorder the digestion.

As soon as diarrhœa begins, the administration of some preparation of opium together with aromatics, camphor, and a little chloroform, is urgently called for. Two parts of "chlorodyne" to one of spirits of camphor is a very good combination, thirty drops for a dose. To be repeated as required. Another very serviceable prescription consists of equal parts of spirits of chloroform, spirits of camphor, laudanum, aromatic tincture of rhubarb, and tincture of ginger. Teaspoonful doses every hour or two according to the urgency of the case until four or five doses have been taken. In alternation with either of the combinations, an aromatic sulphuric acid mixture may be given to advantage. A popular formula is as follows:

℞. Acid. sulphuric. aromat... ℥ j.
Tinct. opii deodorat..... ℥ vj. vel ℥ j.

M. Sig.—Twenty or thirty drops in water every hour or two.

I think it important to administer these remedies

hot, unless they create nausea. The hot water, or morphine combined with chloral, should be administered by hypodermic injection, as the severity of the case may demand. Either of the following formulas may be chosen for exhibition every half hour or hour just after a spell of vomiting :

℞. Chloroform.,
Tinct. capsici,
Tinct. cannab. ind.....āā ♏ xxx.
Acid. hydrocyanic. dil..... ♏ xx.
Ether..... ♏ viij.
Spts. menthæ pip..... ♏ xv.
Syrup sassafras comp.....ad ℥ j.
Sig.—A small teaspoonful every half hour or hour.

℞. Spts. ammonia aromatic.,
Spts. of chloroform.....āā ℥ j.
Tinct. of capsicum,
Compound tinct. of cardamom,
Tinct. of ginger.....āā ℥ ss.
M. Give in the same doses as the above.

A mixture of aromatic powder, gum arabic, and acetate of lead may also be given alternately with either of these, if desired. In any case a mustard plaster should be applied over the stomach and abdomen, but not left on too long; and, if required, enemata of eight or ten grains of acetate of lead may be given after each evacuation. I think it is important to bear in mind that some preparation of opium or morphine, or morphia combined with chloral, is the chief remedy for cholera, and the surest agent we can use to arrest the progress of the disease. When called, therefore, to a case already in the stage of invasion, I believe morphine, or morphine and chloral, should be administered hypodermatically without delay, in order to get these sovereign remedies into the system as soon as possible ; for if we can arrest the disease before the patient becomes collapsed, his chances of recovery will be very greatly increased. Caution must be exercised, however, when this form of treatment is pursued, for narcotism is easily induced by repeated hypodermic injections, whereas very large doses of opiates can be given in this disease, by mouth and rectum, with comparative impunity. The strength of the solution usually employed for injection is morphine, gr. iijss. or gr. iv., with chloral hyd., ℥ ijss. or ℥ iij. to the ounce of water. Inject twenty or thirty minims.

The hypodermic use of morphine and chloral is, of course, contraindicated when the stage of collapse has become well developed. During this stage it is most essential that the patient should be kept perfectly quiet, and in the horizontal position. No violent rubbing should be allowed, but I have found it beneficial to gently rub the limbs and extremities with hot oil. To allay thirst let the patient suck ice frequently. Carbolic acid water or simple acidulated effervescing drinks may also be given by the tablespoonful. It is unsafe to allow the patient to drink any fluid whatsoever in large quantities. In this stage, especially when the acts of vomiting and purging have become less frequent and the algid state well developed, very small quantities of stimulants are useful, but they should be given with great caution, lest vomiting should be provoked. Stimulating enemata may also be given, but where the stomach is intolerant it is often better to inject small quantities hypodermatically. Experience teaches us, however, that anything like the free use of stimulants in cholera is uncalled for and exceedingly harmful. I have sometimes found small doses of both atropia and strychnia, administered by hypodermic injection, apparently effectual in bringing about reaction. Amyl nitrite, by inhalation, may be given, but it seems to exercise very little permanent beneficial effect. Intravenous administration of milk and salines may be resorted to, but the reaction thus produced is not generally of a permanent character, so that many of those who have given this method a fair trial have abandoned it.

Of late years, in Southern India, careful experiments have been carried out in reference to the value of impregnating the atmosphere of the sick room with sulphurous acid, by the burning of sulphur. The result has been that this procedure has been introduced as part of the treatment of cholera. I have on several occasions carefully tried this plan myself, by subjecting the inmates of two different cholera sheds to exactly the same conditions and treatment in every respect, with the exception that in one the atmosphere of the shed was kept impregnated with sulphurous acid, and in the other *not*. I have always found that the proportion of recoveries was considerably greater in the shed where sulphur was burned. I therefore now always proceed to burn sulphur in the patient's room, as part of the treatment of cholera, and consider it an important adjuvant.

The atmosphere should not be so highly impregnated as to cause the patient or attendants to cough violently.

Sulphurous acid thus applied is not only a useful remedy, but it is also believed to decrease the liability to the propagation of the disease, and to its contraction by the attendant.

During the stage of reaction, great care should be exercised. Vomiting often continues, and the normal absorbing power of the stomach and intestines is but slowly restored. Liquid nourishment by the spoonful should be most cautiously given; well salted broth and milk, given as hot as possible, and not too frequently, are the only forms of food admissible until the enfeebled stomach shows signs of recovering its tone. Peptonized beef-tea and milk are frequently well borne, if carefully prepared (two or three tablespoonfuls) Each dose may be sweetened, if desired. The patient should be made to lie down, kept perfectly quiet, covered with heated blankets, and dry heat applied to the surface of the body, especially to the extremities, by means of hot bottles, heated flat-irons, etc. In India the administration of calomel to any extent has lately been discouraged, one or two small doses may be given if thought best, but not more. As soon as frequent vomiting commences—or the stage of invasion becomes established, the combinations containing opium which have been mentioned, had better be discontinued, and either of the following mixtures given in teaspoonful doses at intervals, after a spell of vomiting.

At the same time, also, morphine, so as not to nauseate the patient. If vomiting persists, the following emulsion may be given, if deemed best :

℞. Acid. carbolic..... gr. vij.
Bismuth. subnit..... ℥ ij.
Mucil. acaciæ,
Aqua menth. virid..... āā ℥ j.
Sig.—A teaspoonful every hour or two.

But in this stage it is good treatment to let nature do the work of restoration, and give as little medicine as possible. We must have in mind, however, that the kidneys must be assisted to resume their functions, and for this purpose mild diuretics, such as potass. nitras, should be carefully administered. If fever supervenes, it is apt to be of a typhoid character : a combination of iodine and carbolic acid then exerts a beneficial effect. A popular formula is as follows :

℞. Acid. carbolic..... gr. iijss.
Tinct. iodi..... gtt. xv.
Aquæ menth. pip..... ℥ iv.
M. Sig.—A tablespoonful every two or three hours.

To relieve restlessness and insomnia, potass. bromid. is often useful.

If the attack of cholera is arrested before the patient becomes collapsed, the state of convalescence will probably be of short duration, and the health soon be restored. If, however, the patient is rescued after being in a profound state of collapse for a length of time, the convalescence will generally be protracted.

LARGE DOSES OF POTASSIUM OR SODIUM IODIDE IN SUDDEN DEAFNESS OF SUPPOSED SYPHILITIC ORIGIN.[1]

By ALBERT H. BUCK, M.D.,

NEW YORK.

The following very brief histories of cases are offered as a contribution to the subject of the daily administration—through a period of several days, or even weeks—of large doses of potassium or sodium iodide for the relief of sudden or rapidly developed deafness due apparently to the presence of syphilitic lesions in the labyrinth, or in some part of the auditory nerve outside of this system of cavities, or finally, in those parts of the tympanum which constitute the movable barriers of separation between this cavity and those of the labyrinth. I will add that I have been careful not to introduce among these cases any in which easily recognizable inflammatory lesions, presumably of syphilitic nature, were observed in the tympanum, or any in which, from the past history, it seemed probable that any such middle-ear lesions had been present at the time when the deafness developed. I have omitted such cases because nobody is disposed to doubt the curability of even very marked deafness when due to syphilitic lesions involving a large part of the tympanic mucous membrane, and interfering with the mechanism of the ossicles.[2] It would, therefore not be very profitable on the present occasion to report any such cases; particularly as my chief object in making this communication is to throw a little light, if I can, upon the prognosis and treatment of what appears to be syphilitic disease of the labyrinth, and at the same time to profit by the experience which other members of the Society may have had in the treatment of such cases, and which this communication, I trust, will lead them to publish. On the other hand, I have not thought it necessary to exclude one or two cases in which evidences of long-standing chronic catarrhal inflammation of the tympanum existed, but in which, at the time of my examination of the ear, no signs of congestion or swelling could be discovered. The profoundness of the deafness and the rapid manner in which it developed in these cases, are, it seems to me, characteristics of syphilitic disease of the auditory nerve rather than of catarrhal lesions in the tympanum.

There is still another point to which I must call attention. In the majority of the instances enumerated below, the grounds for suspecting syphilis to be the cause of the deafness seemed to be amply sufficient, but in a few the evidence in favor of such a conjectural diagnosis was certainly not strong. Indeed, in one case (Case IV.), there was no direct evidence that the patient had ever had this disease. His remarkable tolerance of the iodide of potassium (slowly increasing doses until finally 360 grains were taken daily for a period of one week) and the general resemblance of his attack to those of an acknowledged syphilitic nature, are the only grounds on which I can justify myself in placing this case in the same category with the others.

The literature of this particular subject is scanty. The attention of the profession was first called to it in 1877 by Dr. Roosa's report of a remarkable case in which, from a condition of almost total deafness, the patient's hearing within a few weeks was restored to nearly a normal condition.[3] A second, less striking instance, is reported by Dr. Roosa on page 526 of the same work. Beside these I can find only two other reports which throw light upon the employment of large doses of potassium iodide in the treatment of labyrinthine deafness, presumably of syphilitic origin, viz., those of Dr. Samuel Sexton[4] and Dr. David Webster.[5] In some of these cases, however, it is not perfectly clear that middle-ear lesions may not have contributed materially to the deafness.

From the strict standpoint of scientific inquiry it may be objected that no trustworthy deductions can be made from these published cases, or from those which I am about to report, with regard to the effects of the iodides upon syphilitic labyrinthine lesions, inasmuch as in all of them, with a single exception, mercury was administered at the same time. The objection is certainly a valid one; but, as an offset, I will say that, so far as I have any knowledge of the subject, no reports of success in the treatment of this class of cases have ever been published previously to 1877 (Dr. Roosa's report), that is, not until after the iodides had been administered in much larger doses than it had previously been customary to administer. From this circumstance, and from analogous experiences (on the part of others) in the treatment of syphilitic brain lesions, I think that we may properly ascribe to the iodides whatever curative phenomena have been observed in these few cases of sudden deafness.

Case I.—Male; thirty-eight years of age; first seen on October 25, 1880. He began to grow deaf about one year previously. Convulsions occurred at the onset. He was put at this time under ordinary anti-syphilitic treatment. Despite this, however, the hearing steadily and markedly diminished. Patient was very deaf at time of examination, which revealed no lesions adequate to explain the deafness. All that I know about the subsequent history of the case is comprised in the following extract from a letter written by the physician in attendance, Dr. C. McBurney: "Not very long after you saw the patient he developed mania, became very violent, and gave an immense amount of trouble in every way. This mania was doubtless dependent on some syphilitic lesion, and under the very large doses of iodide (several hundred grains daily) the mental disturbance disappeared. The deafness, however, was only slightly relieved."

Case II.—Male; twenty-seven years of age; patient seen for the first time on November 12, 1881. He gave a history of decided naso-pharyngeal catarrh and slowly increasing deafness since the age of fifteen. Eight or nine months ago syphilitic manifestations. Ten or twelve weeks later the deafness, which up to that time had not been very noticeable, became very marked, and at the time of my first examination it was so decided that I could make myself understood only by placing my lips close to the patient's right ear and fairly shouting into it what I had to say. In the left ear the deafness was apparently absolute. In the right ear there were evidences of a former, but now healed, otitis media purulenta (viz., a cicatricial reproduction of a part of the membrana tympani); in the left ear the membrana tympani was simply opaque in appearance and somewhat sunken. There was decided naso-pharyngeal catarrh, with the characteristic tone of voice. Eustachian tubes pervious to air. Hearing not affected by inflations. It not being clear to what extent the recent increase of deafness might be due to the naso-pharyngeal catarrh, I directed treatment toward the relief of this affection as well as toward the constitutional syphilis. On the one hand, I applied a solution of nitrate of silver (twenty grains to the ounce) to the affected mucous membrane of the naso-pharynx three times a week; and for the anti-syphilitic part of the treatment I recommended daily inunctions of a five per cent. preparation of Squibb's oleate of mercury, and the internal administration of the iodide of potassium, three times daily, in increasing doses.

On December 8th the patient's gums began to be noticeably affected, and the inunctions were accordingly discontinued.

On December 17th he began to complain of great lassitude. He was then taking daily only thirty grains of the iodide of potassium and three grains of the sesqui-

[1] A paper read before the American Otological Society, July 15, 1884.
[2] See the Pathology and Treatment of Venereal Diseases, by Freeman J. Bumstead and Robert W. Taylor. Philadelphia: H. C. Lea. 1879.
[3] Roosa: Diseases of the Ear, fourth edition, p. 528.
[4] American Journal of Otology, vol. ii., p. 301.
[5] Archives of Otology, vol. xii.

carbonate of ammonia. As his face also wore a haggard look, I advised him to stop all treatment for a few days.

On December 27th the iodide of potassium treatment was resumed; the sesquicarbonate of ammonia being omitted from the mixture. Numerous small ulcers visible on the gums.

December 30th.—Forty-five grains of the iodide of potassium daily. The local applications to the vault of the pharynx were discontinued about this time.

January 4, 1882.—Fifty-five grains daily. An eruption of small pustules has broken out on his face and shoulders.

January 10th.—Complains of a "cold in the head."

January 13th.—Sixty-five grains daily. He complains of headache, a sensation of soreness in the back, sore throat, a very free discharge from the nose, frequent sneezing, and an occasional attack of coughing. A brief suspension of the treatment advised.

January 14th.—Two decided chills with marked prostration occurred during the night. This morning he looks pale and haggard, and complains of a sense of discomfort in the abdominal region. I prescribed a mixture of the ammonio-citrate of iron and the compound tincture of cinchona, each dose containing two grains of the former and one drachm of the latter.

January 17th.—The iron and cinchona mixture soon produced a decided ringing in his ears, and he discontinued it. All the other unpleasant symptoms, however, have disappeared, and he feels comparatively well again. The hearing, too, of late, has noticeably improved. At times he has been able to understand sentences spoken in an ordinary tone of voice at a distance of four or five feet from his right ear. The improvement, however, has never lasted longer than a few hours, or at most a day, at a time. To-day I am able, sitting directly in front of him, at a distance of from two to three feet, to make myself understood by simply raising my voice slightly. He does not appear to read my lips; in fact they are concealed by my mustache.

January 18th.—At the suggestion of Dr. F. R. Sturgis, of this city, who saw the case in consultation with me, I prescribed a saturated solution of the iodide of potassium (1 minim, = about 1 grain). Of this solution the patient was instructed to take fifteen minims three times a day, after his meals, and afterward to increase the dose on the alternate days by five minims. Thus, for example, it was intended that he should take 45 minims a day on January 19th and 20th, 60 minims on the 21st and 22d, 75 minims on the 23d and 24th, and so on.

January 31st.—He is now taking 120 minims daily without any discomfort whatever. Appetite good. A few insignificant pimples are still visible on his face. During the coming week he is to discontinue the iodide of potassium, and in its stead to take daily a drachm and a half of the syrup of the iodide of iron.

February 6th.—Potassium iodide resumed: 120 minims daily.

February 18th.—One hundred and ninety-five minims daily. The papular eruption on the patient's face is now quite noticeable. He is again to discontinue the remedy for one week, and to take the iodide of iron instead. A still further improvement has taken place in the hearing. I can now converse with him at a distance of at least four or five feet; my pitch of voice being as nearly as possible the same as when I tested the hearing on January 17th.

February 24th.—One hundred and ninety-five minims daily.

March 3d.—Two hundred and forty minims daily. No discomfort whatever from the remedy. Hearing distance has increased to seven feet. Iodide of iron substituted for a few days.

March 8th.—Two hundred and forty minims.

March 12th.—Two hundred and seventy minims.

March 13th.—Patient is totally deaf this morning, the result, apparently, of a cold which he contracted last evening. Marked hoarseness. Right Eustachian tube obstructed, and right membrana tympani markedly sunken. Inflations by Politzer's method and naso-pharyngeal treatment to be resumed. The iodide of potassium to be discontinued.

March 20th.—The hearing is again as good as it was on March 3d. Two hundred and seventy minims to be taken to-day.

March 24th.—Three hundred minims.

April 28th.—Three hundred and forty-five minims.

May 15th.—Four hundred and eighty minims.

May 22d.—Five hundred and twenty-five minims.

May 24th.—General malaise. Hearing again quite poor. Numerous small ulcers on gums, on inner surface of lips, and on frenum of tongue. Nitrate of silver (solid) applied to each. The iodide of potassium treatment to be abandoned.

July 6th.—Patient writes from his home in the country that the ulcers have healed, and that his general health is again perfectly good. His hearing, however, remains poor.

The last report which I received was dated September 11th. The ulcers had reappeared on his gums and lips toward the end of July, and he had suffered more or less from "malaria" during this period of nine or ten weeks. At one time the hearing had been even better than it was in New York during the previous month of March. It soon diminished again, however, and was, at the date of his letter, about as bad as when I first saw him.

Case III.—Male; forty-five years of age; February 24, 1882. Deafness began to develop four years previously, and in about two years it had become so marked that it was only with great difficulty that he could hear what was said to him. During the past two years the hearing had remained unchanged. Syphilitic manifestations twenty-five years previously. He had also, up to a comparatively recent date, used alcoholic stimulants to excess. Recently he had had some difficulty with his eyesight, and there had been some paresis of the muscles of the lower extremities.

Treatment (by Dr. E. D. Hudson, Jr., of this city): inunctions with a five per cent. Squibb's oleate of mercury, and increasing doses of the iodide of potassium; beginning with five minims of a saturated solution, to be taken three times daily, and the dose to be increased by five minims on alternate days.

On April 6th his gums began to be affected, and the inunctions were discontinued. Two hundred and eighty-five minims of the iodide of potassium solution taken daily. No eruption. No coryza. No discomfort of any kind.

April 12th.—Three hundred and fifteen minims. No improvement in the hearing.

April 20th.—Potassium iodide discontinued during the past week, but now to be resumed.

May 4th.—He has taken 315 minims daily during the past two weeks, without any unpleasant effects, but also without any appreciable improvement in the condition of the hearing.

Treatment abandoned.

Case IV.—Male; fifty-two years of age; robust health; professional musician (wind instrument); November 2, 1883. Patient had been somewhat hard of hearing since 1877. In the left ear the hearing power had been almost, if not quite, destroyed, but with the right ear he had been able to hear fairly well—well enough for all ordinary purposes of daily life. On October 27th he began to grow quite deaf in the right ear, and in less than forty-eight hours he had entirely lost the hearing in that ear. There was an entire absence of anything like vertigo, but the tinnitus was very marked, and extremely distressing. He spoke of it as a terrible rushing sound in his ear. At the time when I saw him (November 2d) I was obliged to communicate with him in writing, as he was apparently perfectly deaf in both ears. Both middle ears and external auditory canals seemed to be essentially normal. No history of syphilis.

At first I was disposed to look upon the deafness as due to the rupture of a blood-vessel and the escape of blood into the labyrinth. On this supposition I had three leeches applied immediately to the region of the right tragus, and advised the promotion of free after-bleeding. A blister was also applied behind the ear, and four or five days later a second one was applied at the same spot. No beneficial effects following these measures, I prescribed a saturated solution of the iodide of sodium. Of this he took at first 30 minims daily, and then gradually increased the dose, until, from December 18th to December 24th, he took daily 360 minims. He experienced no unpleasant symptoms from the large doses beyond a scanty eruption on his forehead, and some general malaise toward the end of this period. The hearing, however, was not restored in the slightest degree, and the tinnitus was not appreciably diminished. Treatment then abandoned.

Case V.—Male; forty years of age; apparently in robust health (patient of Drs. George A. Peters and Wm. A. Valentine); May 24, 1884. Two days previously he had experienced decided vertigo, nausea, and double tinnitus. In a short time vomiting of mucus and bile set in, and continued, at intervals, for several hours. He then made the discovery that he had entirely lost the hearing power of both ears. Examination of the ears revealed no lesions other than those of a chronic catarrhal inflammation of both tympana. He declared that he could hear the ticking of my watch in his right ear, but he was not able to distinguish spoken words.

As the patient had been under my care ten years previously for syphilitic sore throat with subacute otitis media, I advised a trial of the mixed treatment described above.

May 28th.—The vertigo has largely disappeared, and patient says that he can understand what his wife says to him in a loud, shrill voice.

On July 7th I learned from Dr. Valentine that little or no improvement had taken place in the hearing, that the tinnitus was still marked, and that he could not as yet walk steadily. Up to that time he had not been able to take more than 90 grains of the iodide of potassium daily. It was found that he could take this more comfortably than he could the iodide of sodium, which nauseated him.

July 14th.—Patient has been taking 180 grains daily, but without any effect upon the hearing. On the 11th the treatment was suspended, as patient's stomach began to rebel.

Soon afterward the treatment was resumed, and before the end of the month the daily quantity of potassium iodide taken by the patient had reached 270 grains. He had taken this quantity daily for a period of one week, when it was found necessary to stop the treatment altogether, as his general condition showed that it was doing him more harm than good. It certainly produced little or no effect upon the hearing power, as it was still found necessary to communicate with him in writing.

It is not possible to draw any very satisfactory conclusion from such a small number of cases. For example, the treatment failed to accomplish anything worthy the name of improvement in all five instances, and yet, as has been observed in the cases reported by Dr. Roosa, and in those reported by Dr. Webster, essentially the same treatment may accomplish strikingly favorable results. I have compared these cases very carefully with those reported above, in the hope that I might find out certain distinguishing features which would enable us to divide all such cases into two classes, viz., those which might be benefited by treatment, and those in which treatment would almost certainly fail. I have not, however, been able to find any such distinguishing characteristics. The only plausible explanation that I can give of the infrequency of our successes is this: A syphilitic gumma in the labyrinth, and especially in the cochlea, will rarely fail to produce damage from which recovery is scarcely possible. Treatment may lead to the absorption of the gumma, but it cannot readjust and render functionally useful those delicate and carefully adjusted organs which the tumor has disarranged, and perhaps even destroyed. In the brain excellent compensatory provision seems to have been made for the pressure caused by a gumma or other morbid growth; in the labyrinth, on the other hand, the rigidity of the surrounding walls and the paucity as well as smallness of the blood-vessels, almost preclude the possibility of compensation. On physiological grounds, therefore, I feel confident that such cures as those reported by Dr. Roosa and Dr. Webster will always be exceptional. In these cases we may assume that the pressure had gone only so far as to suspend for a time the vibratory power of the cochlear structures, but had not destroyed or even seriously disarranged them. It is also possible that the gumma may occupy a position in the vicinity of the oval window and foot-plate of the stirrup, or in that of the secondary tympanic membrane. A lesion so situated would be competent to annul the power of hearing, but it would not necessarily destroy it.

In the next place, it will be observed that in the favorable cases the improvement began to show itself as early as during the second or third week of the iodide of potassium treatment. This would suggest the question whether it is really necessary to push the doses to the extreme limits recorded above (viz., 270 gr., 315 gr., 360 gr., 525 gr., and "several hundred grains" daily). This is a question which cannot be satisfactorily answered until we shall have accumulated a greater array of evidence. I am disposed, however, to adopt for the present the rule of not giving more than from one to two drachms daily in those cases in which commencing improvement is observed during the second or third week of treatment.

In conclusion, I will state that in the first years of practice I must have registered some cases of syphilitic disease of the labyrinth as instances of "Ménière's disease," and I believe that this error—if error it be—has probably been committed by other specialists.

HAY ASTHMA—CAN IT BE RELIEVED?

By WILLIAM JUDKINS, M.D.,

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I FEEL that I should be sadly derelict of duty did I not give to the profession, and through them to the laity, my successful treatment of this obstinate and distressing complaint. Though only the record of one case, the result is so gratifying to the patient, her family, and myself, that I feel justified in sending these few lines regarding it, in hope of benefiting others.

Mrs. ——, aged twenty-eight, married, mother of two children, the youngest four and a half months old. Has been subject to an annual attack of hay fever for fourteen years, and frequently with complications of a severe character. Last year she suffered an attack of bronchitis during the latter part of the asthmatic stage, that came near proving fatal. Convalescence slow. This case first came under my charge in 1880. The attack that year was aggravated in a measure by pregnancy. The only thing at that time that gave any relief was "milk punch," in the proportion of whiskey, 2 oz.; milk, 8 oz. The relief obtained from this was only temporary, when more would be administered; but at no time was intoxication produced, though the remedy was given for several days in succession. In 1881 a reputed "hay-fever resort"—Oakland, Md.—was tried for a part of the season, but no benefit was derived, the attack being fully as severe as at any previous time. 1882 and 1883 were equally as bad, the complication of bronchitis spoken of above coming on last year, which almost caused death. This year prophylactic treatment was commenced, some two weeks before her expected attack, of valerianate of

zinc, gr. i., and pill assafœtida co., gr. ii., combined in capsules, one A.M. and P.M., as recommended by Dr. Morell Mackenzie, of London. It disagreed with her stomach, and was discontinued for three days and then again taken with no bad effect. For five days after her usual time for the appearance of the dreaded affection all was serene. The night of the 20th inst. difficulty of breathing to a limited extent set in. My attention had been called to a case of bronchial asthma, who obtained relief from the use of acid hydriodic, and I immediately ordered my patient to commence its use early on the morning of the next day, the 21st. The effect, in conjunction with counter-irritation in the shape of Rigollot's mustard leaves at the wrist-joints, *was simply magical*, breathing became more and more easy as she continued the remedies. A thunder-storm came up that night, twelve hours after commencing the medicine, and for half an hour she was somewhat "stuffed up," as she expressed it, but had a good night's rest. Ever since then she has been easy—now a week—but is exercising all precautionary measures against taking cold, for fear of a relapse.

I can truly say that about every remedy suggested and recommended from the time that Bostock first wrote on the subject, in 1819, had been tried, but nothing has ever given the relief and sense of comfort that this did. One word more and I am done: the form of administration was that of the syrup—a teaspoonful every hour or two, until relief. If necessary double the dose. The syrup, as prepared by Mr. Gardner—Schieffelin & Co.'s chemist—was the special brand, though where that is not accessible, I imagine the regular acid of the dispensatory on a lump of sugar, gtt. 3 to 5, would be equally as efficacious. The mustard leaves are applied as soon as the first dose is given.

Since commencing the acid treatment, my brother, Dr. C. P. Judkins, has prescribed it in another case, that of a married lady who suffered intensely with the asthmatic symptoms, with perfect relief, that so far has been continuous, and as in my own patient, bids fair to continue so.

The capsules were discontinued when commencing the use of the acid.

216 RACE STREET, August 28, 1884.

THE DISCUSSION ON CHOLERA AND THE COMMA-BACILLUS IN THE BERLIN CONFERENCE.

WE gave last week an abstract of Dr. Koch's lecture on cholera and the comma-bacillus, delivered at the Imperial Board of Health, in Berlin. After describing the bacillus and its relation to cholera, he spoke of the conditions under which it thrives in its home in India. Southern Bengal is a flat country, elevated but little above the level of the sea, and is almost completely submerged during the rainy season. In order to escape the flood, the inhabitants build their houses on artificial elevations, made by piling up the earth taken from the side of the foundation. It thus happens that beside every house or group of houses there is a large hole filled with water. These tanks, as they are called, are very numerous, there being a thousand or more in the suburbs of Calcutta alone. The huts of the natives have no privies attached, and every kind of dirt is thown directly on the ground, from whence it finds its way naturally, into the neighboring tanks. A system of sewerage was introduced in 1865, and at the same time measures were taken to furnish the city with filtered water brought from the river some miles above Calcutta. No improvement in the health of the city was noticed during the first few years that the canal system was being extended, but as soon as the pure water supply was obtained, in 1870, the cholera decreased, and the death-rate from this cause has not since then surpassed, on an average, one-third of its former figures. In the suburbs, between which and the city there is a constant intercourse, but to which the water supply has not been extended, the cholera is as prevalent as before. Similar and even more striking instances of the influence of the water supply were furnished by other cities and places in India. These cases were cited to show the value of pure water, but Dr. Koch did not wish to be considered a partisan of an exclusive drinking-water theory, for he thought that cholera might be propagated in many different ways in any particular locality, and further, that each locality had its own peculiar conditions favorable to the spread of the disease.

In former times the cholera travelled along the caravan routes from India through Persia and thence into southern Europe, but now it takes the more speedy way through the Red Sea and the Suez Canal. There is little likelihood in these times of the disease coming overland, but the danger of its introduction by way of the Red Sea is becoming greater every year. From Bombay, which is seldom free from cholera, to Egypt is a matter of only eleven days, to Italy sixteen days, and not more than twenty days, at the most, to the South of France. As regards the danger of the transportation of cholera in ships, however, much depends upon the character of the vessel. Epidemics occur only on those ships in which large numbers of men are crowded together. In merchant vessels and freighters, although there may be a few cases of cholera during the first days of the voyage, the disease never becomes epidemic nor continues for a long time.

In concluding, the lecturer spoke briefly of the value of the discovery of the cholera bacillus. In the first place, it is of the greatest importance to be able to diagnose correctly the first case of cholera occurring in a country or in any locality. This, he believed, could now be done with absolute certainty if the comma-bacillus were found in the dejections. And further, when the cause of a disease and its properties are thoroughly understood, we are in condition to determine with accuracy its etiological relations, and also to institute a rational and effectual mode of treatment. Not the least important consideration is the hope, now offered, of discovering a certain means of prophylaxis.

At the close of Dr. Koch's lecture, Professor Virchow announced that a second conference would be held on the evening of July 29th for the purpose of discussing the various points suggested by the paper.

After the members had re-assembled, Professor Virchow stated that in order to keep the discussion within bounds, certain questions had been prepared, covering all the points raised in the lecture, upon which those present were requested to express their views. The first question was:

IS CHOLERA CAUSED BY AN INFECTIOUS MATERIAL ORIGINATING ONLY IN INDIA?

This was answered in the affirmative. Herr Hirsch said that in the Sanitary Conference, held in Vienna in 1874, the members were unanimous in the opinion that cholera occurs in Europe in consequuence only of the introduction of the specific poison from India. This unanimity was the more noteworthy as on other questions relating to cholera there were many conflicting opinions expressed by the delegates.

The next question proposed for discussion was:

IS THE INFECTIOUS MATERIAL CONTAINED ONLY IN THE DEJECTIONS, AND LATER ALSO IN THE VOMITED MATTERS, OR IS IT FOUND ALSO IN THE BLOOD, URINE, SWEAT, AND EXPIRED AIR?

Dr. Koch stated that it was his firm conviction that the cholera poison was present in the dejections only. In exceptional cases it was found in the vomited matters, but only when these matters were of intestinal origin.

The two following points were considered together:

IS THE PRESENCE OF THE COMMA-BACILLUS OF DIAGNOSTIC IMPORT? AND, IS THE INFECTIOUS MATERIAL OF CHOLERA IDENTICAL WITH THE COMMA-BACILLUS?

Professor Virchow said that, in regard to the second point, some elements of absolute certainty were wanting. On the one hand, no one had as yet succeeded in producing cholera in the lower animals by inoculation with the comma-bacillus. Dr. Richards had indeed fed hogs upon intestinal matters taken from cholera patients, and the animals had sickened and died, but Dr. Koch maintained that death in these cases was caused by poisoning and that the disease produced was not cholera. He thought it very desirable that comparative experiments should be made with pure cultures of the comma-bacillus and with the cholera dejections, for at present it seemed possible that there might be some other infectious material in addition to the bacillus. On the other hand, the whole history of cholera, its mode of origin and spread, seemed inexplicable, except upon the theory of a living contagium. And among all the micro-organisms found in the cholera stools the comma-bacillus alone could with any degree of probability be accused of causing the disease. The question whether there was any other disease in which this particular micro-organism was present could not yet be answered with certainty, and indeed, it might be many years before it could be affirmed or denied with strictly scientific accuracy. But for the present the speaker thought that it was incumbent upon the sanitary authorities to act as though the comma-bacillus was the actual and certain cause of cholera.

Dr. Koch remarked that his reason for believing that the hogs in Dr. Richards' experiment were poisoned, was that they died so speedily, within two and a half hours. And then every attempt at a reproduction of the infectious material in these cases failed. He thought, however, that the experiments told in no way against the bacillus theory; on the contrary, they showed that a poisonous substance was formed in the intestinal canal under the influence of the comma-bacillus. In regard to a point suggested by Dr. Hirsch, the speaker said that he had examined sections of the intestinal mucous membrane taken from a man dead of cholera morbus, but had found no comma-bacilli, although there were swarms of other micro-organisms present. In answer to a question asked by Professor Virchow, whether in a doubtful case, presenting the symptoms of either cholera morbus or Asiatic cholera, but in which simple microscopic examination of the stools had revealed the presence of countless comma-bacilli, he would hesitate to make a diagnosis. Dr. Koch asserted emphatically that he would not. He said, however, that it was seldom possible to find the micro-organisms in great numbers in a microscopical examination of the dejections. In most cases the culture method is necessary, and this never fails. This question of an early diagnosis of cholera, he continued, is a very important one indeed, for if the first case in any locality be recognized immediately, it can be isolated, and thus the spread of the disease be prevented. But if the diagnosis be delayed until half a dozen or more cases have occurred, then all control over the outbreak is lost. Regarding the difficulties of a general use of this method, he had only to say that the process of staining the tubercle bacilli, which was now very generally understood, was far more difficult than was that of cultivating the comma-bacillus. In answer to an inquiry of Dr. Schubert, he said that he had found the bacilli present very early in the disease, within a few hours, and he could state positively that the first colorless watery stools contained them in great numbers. Another hypothetical question was proposed, whether in the case of a person coming from a cholera district and presenting symptoms of cholera, but in whose stools no comma-bacilli could be detected, the patient should be allowed to go where he would or should be kept under observation? To this the speaker replied that the case ought certainly to be regarded as a very suspicious one. But this was not exactly a case in point. A person, known to have come directly from a cholera infested region, who shall be taken ill with symptoms of cholera, ought to be isolated at once, there would be no necessity of searching for the comma-bacillus. But to suppose a case. Cholera is now ravaging the south of France. A case with symptoms resembling those of cholera occurs suddenly in a German city, and comma-bacilli are found in the dejections. Now, the cholera poison is already in the city, and much more active measures must be taken than simply to bury the corpse and disinfect the surroundings.

It having been objected that the culture of the comma-bacillus required a well-appointed laboratory, and the possession of considerable skill and experience on the part of the physician, Dr. Koch explained the method employed by him. The gelatine used could now be bought in the shops. All that was necessary was to warm the gelatine, mix it with a flocculus of mucus from the stools, and then pour it out on a piece of glass. This is then placed under a glass bell, or, if the latter cannot be had, between two plates, as was done in the experiments made in Calcutta. It is easy enough to obtain material for examination, for any of the clothes soiled with the passages will furnish enough mucous flocculi for the purpose. A special warming apparatus is not necessary, for the ordinary summer temperature was over 17° C. (62.6° F.), which was sufficient for the development of the bacilli.

The next two questions proposed were:

DOES THE INFECTIOUS MATERIAL POSSESS A GREAT POWER OF RESISTANCE, HAS IT A STAGE OF PERMANENCE? AND, IS IT DESTROYED IN A SHORT TIME BY DRYING?

Dr. Koch said that his opinion on this point was based not only upon his experiments with the comma-bacillus, but also upon the universal experience with cholera. There was no case known with certainty in which the poison of cholera had remained latent for a great length of time, and had then renewed its activity.

Dr. Hirsch related his experience in the cholera epidemic which had visited Posen and West Prussia in 1873. He had seen many cases in which the first persons attacked in a village were women who had washed soiled clothing brought from infected districts. In several of these cases the clothes were allowed to remain some time untouched, before being unpacked and cleaned.

In reply to a question of Dr. Koch he said that the clothes in some cases were left for five or six days, long enough for them to become thoroughly dry. It had been admitted by the lecturer, he continued, that under conditions of moisture the comma-bacillus might remain latent for an almost unlimited period. Why, then, was it not possible, in a place where cholera had been epidemic, for the bacillus to remain alive in moist earth or other damp places during such time as the other conditions were not favorable to its development, and then to become active and give occasion to a new epidemic as soon as a favorable conjunction of circumstances should arise?

Dr. Koch said that he had admitted the possibility of such an occurrence, after having found that the comma-bacillus could endure a very low temperature and could exist outside of the human body, in potato, gelatine, and damp clothing, for example, for an indefinite time. He thought the question a very important one but which the future only could solve. The ground, the water, and everything that could offer an asylum to the bacillus ought to be examined for a long time after the disappearance of cholera from a place. Such investigations could not be made in India, because the cholera was always there, but could be undertaken upon the subsidence of an epidemic in Europe.

The next question proposed for discussion was:

CAN THE INFECTIOUS MATERIAL ENTER THE BODY BY OTHER CHANNELS THAN THE DIGESTIVE TRACT?

The discussion was not confined strictly to this point, but turned rather upon the question whether the infectious material could be transported through the air. Several of those present thought that it might be so carried, at least for short distances, and instanced the frequency with which those who handled the bodies of persons dead of cholera were themselves attacked with the disease. Dr. Leyden thought it very possible for the germs to be carried up into the air with fine particles of moisture during the rapid evaporation of contaminated fluid.

These views were very strongly opposed by Dr. Koch. He thought it much more probable that the disease occurring in those who handled the corpses of cholera patients was due to a want of cleanliness on the part of those individuals. Their hands became soiled and then they took food without washing. The physicians and nurses in hospitals who were careful in washing themselves were no more liable to cholera than other people, and yet, if the poison were carried through the air, they ought to be among the principal sufferers. The cholera bacillus was killed by drying, and it could be carried through the air only in watery spray or in bubbles; in dust it could not live. In regard to cases in which the disease was alleged to have been carried by healthy individuals, the explanation would probably be simplified were all the circumstances known. Very possibly food or other articles were carried from the house of the cholera patient, or the apparently healthy individual might have had a very mild attack of cholera which passed unnoticed.

IS THE INFECTIOUS MATERIAL REPRODUCED IN THE HUMAN SUBJECT, OR DOES THIS TAKE PLACE IN THE GROUND, SO THAT MEN ACT ONLY AS CARRIERS OF IT?

Professor Virchow asked whether, since the comma-bacillus was an air-breathing organism, the intestinal canal could be regarded as a favorable location for its development.

Dr. Koch said that either free oxygen must be present in the intestine, or at least such combinations must be there as would give off oxygen. For we see the bacilli living in great numbers in the intestine, and yet they cease to grow outside of the body when deprived of air. Consequently they must in some way obtain oxygen in the intestine. Other organisms which require oxygen for their existence, as the *oidium lactis* for example, are often found in quantities in the intestinal canal.

Professor Virchow thought it probable that the bacillus was reproduced both outside and inside the human organism. At least it was shown that the reproduction in the ground was possible, but further than that we could not yet go.

The next question proposed was:

IS A DIRECT TRANSPLANTATION POSSIBLE, OR MUST THE INFECTIOUS MATERIAL UNDERGO A SORT OF RIPENING OR GROWTH IN THE GROUND OR ELSEWHERE?

It was supposed, Dr. Koch said, that a sort of ripening of the cholera germ was necessary, because the dejections were not infectious when first passed. This latter assertion was based upon an experiment of Thiersch, but his own opinion was that the clothes were capable of transmitting the disease at the very instant that they became soiled.

Three questions were then presented, embracing the subject of the trasmission of cholera by clothing, rags, merchandise, food, etc. Dr. Skrzeczka thought it very reasonable to suppose that the disease-germs could be carried in rags, for these were packed in large bales, and if the rags were not thoroughly dried, those in the centre of the bale might remain moist for an indefinite period.

Dr. Koch answered that this question of the possibility of infection through rags was discussed in the cholera congresses of Vienna and Constantinople, and nobody was able to furnish an instance of the spread of the disease by this means. The rags should, he thought, be thoroughly dried before being packed. But it seemed to be of little use to prevent the importation of rags, if human intercourse was to be allowed. The danger of the introduction of cholera through apparently healthy individuals, a danger which cannot be guarded against, is far greater than that of transmitting the disease by rags. As regards water he said that, as far as his experience went, the comma-bacilli die in clean water, not immediately, but within a few days.

The remaining questions were:

IS A SPECIAL INDIVIDUAL PREDISPOSITION NECESSARY FOR THE ACTION OF THE INFECTIOUS MATERIAL? WHAT IS THE PERIOD OF INCUBATION? DOES ONE ATTACK CONFER IMMUNITY FOR A CERTAIN LENGTH OF TIME? AND, CAN THE MODE OF ACTION OF THE BACILLI BE REGARDED AS A POISONING?

Dr. Leyden thought that one attack did confer a degree of immunity against subsequent attacks, yet this immunity was not absolute, for cases had been reported in which an individual had suffered from cholera several times during the same epidemic.

Dr. Hirsch stated that in the epidemic studied by him, in 1873, the period of incubation seemed to vary between two and four days.

Professor Virchow then closed the discussion by tendering his thanks to Dr. Koch for the lucid report which he had given of his studies of the comma-bacillus, and he said that the members would probably be called together again to discuss these questions, and to impart any new experiences which they might have gained in regard to the prevention or cure of cholera.

PERNICIOUS MALARIAL ATTACKS OF UNUSUAL TYPE.—The following are the conclusions of a paper read by Dr. Besnier at a recent meeting of the Société de Médecine de Paris (*L'Union Médicale*, July 26, 1884): 1. Certain chronic diseases or morbid conditions, existing prior to the malarial attack, and giving rise in their course to more or less grave secondary symptoms, or manifesting themselves by repeated functional disturbances, may sometimes so influence an intermittent fever as to render it abnormal or pernicious. 2. In such cases the form of the pernicious attack is in direct relation with the antecedent disease. It resembles in its prominent symptoms one or other of the secondary accidents or the functional troubles of this disease, but in an aggravated degree. The attack is thus more or less masked by the antecedent malady and may readily escape recognition. 3. The morbid states which precede the fever and which impress upon it their form, may be very slight and compatible with all the exigencies of ordinary life. The malaria, on the other hand, may have been contracted in an infected region and may reveal itself for the first time long after the patient has left that country. The pernicious attack may thus be more insidious and more sudden in its onset than are malarial fevers ordinarily. 4. These pernicious paroxysms owe their gravity apparently less to the malaria than to the antecedent disease upon which the malaria has engrafted itself. They occur with perhaps greater frequency in non-malarious regions. They yield, as a rule, readily to quinine, even in moderate doses. The antecedent affections in the cases studied by Dr. Besnier, and upon which he based his conclusions, were: arterial atheroma with encephalic troubles, diabetes accompanied with albuminuria, and angina pectoris. The pernicious paroxysms assumed three very distinct types: a delirious, a comatose, and a cardialgic form.

Reports of Hospitals.

ROOSEVELT HOSPITAL, NEW YORK.

Reported by J. E. NEWCOMB, M.D.,
HOUSE PHYSICIAN, ROOSEVELT HOSPITAL.

The following notes, taken from the hospital records, narrate the history of

A CASE IN WHICH ALL THE SIGNS AND SYMPTOMS OF AORTIC ANEURISM WERE SIMULATED BY AN ENORMOUSLY DILATED HEART

with double aortic valvular lesion.

Thomas K——, New York, single, laborer, aged sixteen, was admitted on August 3, 1881. Father died six years before of hæmoptysis, and mother one year before of uterine cancer. Patient was temperate, denied syphilis, admitted occasional masturbation and sexual intercourse. Had rheumatism three years ago; developed therewith pain in epigastric and præcordial regions, and has been subject to it ever since. For last year has noticed increasing cardiac palpitation and dyspnœa. No œdema; vision at times dimmed; cough for past three months very severe, of late worse mornings and evenings; muco-purulent sputa; quite regular night-sweats for past month; no hæmoptysis; occasional vomiting after meals; some emaciation; bowels usually regular; no urinary changes noted.

On admission rather poorly nourished, weak and tremulous; countenance downcast; face sunburnt, but cyanosed; marked dyspnœa, least troublesome in sitting position; loose cough, with copious muco-purulent expectoration. Cannot sleep on left side; good appetite; some constipation. Urine 1.026; acid; no albumen; microscopic examination negative.

Physical examination.—Heart-apex, sixth space, one inch outside nipple line; impulse strong, heaving, and raising considerable area of chest-wall. Dulness on level of third rib from right border of sternum to half an inch inside left nipple line. Over first and second right interspaces, close to sternum, is an area of dulness; over it is felt a systolic thrill and heard a loud, rasping, systolic murmur, with soft diastolic murmur of lower pitch. A systolic murmur is heard in carotids and subclavians, about equally clearly on both sides; is heard over sternum down to level of third right costo-sternal articulation, where it suddenly becomes softer in character, while at the same time the diastolic murmur heard in its upper interspaces becomes much louder and sharper; latter transmitted down to xiphoid cartilage. At apex is heard a short, blowing systolic murmur transmitted to left, heard behind in both vertebral grooves, louder in left, and as low down as the last dorsal vertebra. A very distinct double murmur is heard in the right supra-spinous fossa. The radial pulse has a rapid rise and fall, with a peculiar "shot"-like effect when hand is elevated above head. Visible pulsation in all superficial arteries of any size. Lungs at right apex, markedly exaggerated voice and breathing, otherwise breathing is feeble everywhere; subcrepitant râles all over chest. A diagnosis was made of aneurism of ascending arch of aorta with aortic insufficiency.

The patient remained in the hospital for about eight months. The details of treatment need not be gone into. Reliance was chiefly placed on digitalis and iodide of potash, the dosage being varied from time to time to suit the requirements of the case. A fortnight after admission he began to have bloody sputa, which continued for some time; later, attacks of spasmodic dyspnœa came on, which were promptly relieved by small hypodermics of Magendie's solution. Ten weeks after admission he began to have nocturnal dyspnœa, with anginoid pain in præcordium and left shoulder, running down arm to elbow. These attacks were sometimes cut short by inhalations of amyl nitrite, and later by internal exhibition of one drop of a one per cent. solution of nitroglycerine. At other times these remedies seemed to have no effect whatever. A month later the arm pain was accompanied by temporary paralysis of entire extremity. Four months after admission a marked thrill and visible pulsation were noted in carotids and over sternum.

The patient was discharged, improved, on April 6, 1882. During preceding two months had had only two dyspnœal attacks. The severity of all the symptoms was greatly abated, though the physical signs remained practically the same. After leaving the hospital he resumed work as an iceman and passed out from under observation. On June 21, 1884, he again presented himself—having enjoyed fair health in the interim, excepting that the cough had steadily persisted. Two weeks before, he caught cold, increasing the cough, and causing orthopnœa, with occasional vomiting after coughing severely. He had scanty muco-purulent sputa, pain in right chest, anorexia, with cramps in belly and calves of legs. Cardiac action was hurried, averaging 120 per minute. Respiration 40 and very labored; evening temperature (mouth), 102.8°; morning, 99.8°; urine, 1.030, no albumen, but hyaline and epithelial casts. Contrasting his present physical condition with that twenty-two months ago, the following points of difference were noted: The heart-apex was in sixth space, three inches below the nipple and five in left of mid-sternal line. On level of the third rib dulness extended from half an inch to the right of sternum to one inch outside left nipple. The area of dulness in the right upper interspaces had extended to third space, and over it was a visible pulsation with marked purring systolic thrill and rasping bruit; the finger placed in supra-sternal notch received a distinct lift at each cardiac pulsation; there was a general bulging forward of the entire chest. The appearance of a localized pulsation over the area of dulness in the right spaces was considered as verification of the previous diagnosis. He was ordered milk diet with ten grains of iodide of potash t.i.d. His dyspnœa continued, but was quite well controlled by small doses of opium. On June 24th had profuse sweating with some dysuria. Next day anginoid pain in abdomen returned, but was quieted by six minims of Magendie hypodermically. Early on the morning of the 27th, while sitting on the side of the bed in the act of voiding urine, suddenly he slid down to the floor, grew cyanotic, radial pulse ceased, respiration became shallow, and ten minutes later he quietly died.

The autopsy was held eight hours after death, by Dr. J. West Roosevelt, curator to the hospital. No aneurism was found, though there was general vascular dilatation in the neighborhood of the heart; the latter organ weighed, free of clots, *thirty-two ounces;* there was general dilatation, the walls being of about normal thickness. The aortic valve was stenosed, thickened, and insufficient, one cusp being entirely gone. The right auricle lay against the chest-wall to the right of the sternum, behind the first, second, and third ribs. The mitral valve was thickened, but seemed sufficient, as did also the valves of the right heart. The liver was hard, firm, and congested, the upper part of the right lobe showing a distinct depression where the heart had rested. The kidneys were firm, of normal size; cortex somewhat thinned; markings distinct; capsule not adherent; chronic congestion. Both lungs were in a state of pigment induration. The other points of the autopsy call for no special remark.

A consideration of the physical condition and situation of the heart at once accounts for the mistake in diagnosis. The enormously dilated right auricle, lying just behind the ribs, gave the percussion dulness, and through its contents received the direct transmission of the general impulse occasioned by every systole of this veritable "cor bovinum." To the eye, ear, and finger the sensations were those of a true aneurismal sac. Cases of this nature are unusual, at least to such a degree as was manifested here. The weight of the heart is by far the largest which the pathological records of this hospital show.

NEW YORK HOSPITAL.

Report of the Case of Yellow Fever in New York.

By FRANCIS M. DWIGHT, M.D.,

HOUSE PHYSICIAN.

No history of the case was obtainable previous to admission at 10.30 P.M., August 29th, when temperature was 100.2°; respiration, 30; pulse, 100, weak and irregular. The patient was well nourished, and there was no œdema. The skin was intensely jaundiced. The conjunctivæ were injected. The pupils were slightly contracted. There was marked nystagmus, general cutaneous hyperæsthesia, and exaggerated reflexes.

Physical examination showed slight dulness over both chests posteriorly. Respiration in places was tubular and accompanied with fine moist râles. Voice could not be obtained. Cardiac sounds were inaudible. Palpation over the abdomen irritated the patient very much, and apparently caused pain. Examination of the urine showed its specific gravity to be 1,018, acid in reaction, dark yellow in color, with about ten per cent. by volume of albumen.

Digitalis was administered hypodermically. Shortly after admission the patient had projectile vomiting. The vomited matter was very abundant; was entirely fluid, and of the color of claret. Microscopic examination showed it to contain immense numbers of partly decomposed blood-cells, free nuclei, and epithelial detritus.

The patient did not respond at all to stimulation. During the night he was restless and irritable, vomiting at intervals of two or three hours. At 3 A.M., temperature was 101.6° F.; respiration, 24; pulse, 100. Two hours later the patient died. The temperature taken immediately after death was 105°.

The autopsy was conducted by Dr. George L. Peabody, and gave the following results: Body was well nourished, deeply jaundiced, and rigor mortis was well marked. There was no œdema. The brain and membranes were normal. The peritoneal cavity contained no fluid; there was no peritonitis. The diaphragm was normal. There were no pleural adhesions. The heart was normal in size, and bright yellow in color. The endocardium and aorta were deeply jaundiced. The valves were competent. The muscular tissue was pale, yellow, soft, friable, and contained an abundance of fat. The lungs contained countless hemorrhages, varying in size from that of a small pea to a small chestnut, and occurring all through the parenchyma. The lungs elsewhere were intensely congested and œdematous. The spleen was about three or four times the size of a normal spleen, was dark in color and somewhat soft. The kidneys were normal in size and very yellow. The capsules were not adherent, the surface was smooth, and the markings distinct. The cortex was somewhat swollen.

The stomach contained nearly a pint of fluid, which was largely composed of dark-colored blood. The mucous membrane was congested and covered with mucus. Near the pylorus there was some thickening of the mucous membrane. There was no ulceration. The duodenum and upper part of the jejunum were congested and the mucous membrane somewhat swollen. The common bile-duct was pervious. The intestines throughout contained a large amount of blood, some of which was fluid and some thick, dark, and tarry in color and consistence. No ulcers were found. The liver was normal in size. The cut surface was mottled and presented areas, apparently peripheral, of brilliant red color with pale yellowish centres of acini which were deeply jaundiced and contained fat. The gall-bladder contained a small amount of dark thick bile.

Microscopic Examination.—Heart: Abundance of fat was found, both in the form of granules and of small drops, and to such an extent in many places as to obscure the transverse striæ. Kidneys: There was an abundance of granular fat and drops of fat in the epithelium of the straight and convoluted tubes. Elsewhere the epithelium appeared swollen and clouded. Liver: There was much extravasated blood and imbibition of blood coloring matter in the peripheries of the acini; at the centres the cells contained an abundance of fat.

Progress of Medical Science.

Cachectic Purpura.—According to the opinion of Dr. A. Mathieu, purpura hemorrhagica is not a disease sui generis, but is merely a symptom of some other morbid condition. He proposes, therefore, to group together all the various forms of the affection under the general name of *purpura cachectica*, of which he recognizes three groups. The first comprises the various forms of hemorrhage occurring in pernicious anæmia. In the second group the purpura appears in the subjects of tuberculosis. The nervous system plays here an important rôle, so that the affection has been called by some *purpura neuropathica* or *myelopathica*. The hemorrhages occurring in the third division are occasioned by the cachexia of Bright's disease. They are a symptom as frequently met with as œdema. A special form of cachectic purpura, and one which is closely allied to that of Bright's disease, is senile purpura. Atheroma of the arteries is a very important factor in the etiology of this variety. This form of purpura is characterized by its long duration, its peculiar seat, occurring as it does often on the dorsal surfaces of the hands and feet, and on the ulnar side of the forearm, and by the shape of the petechiæ which are small, lenticular, and without any areola. It is also worthy of note that the red globules in this form of purpura, as was demonstrated by Hayem, are normal in function and possess the proper amount of hæmoglobin. The author sums up the results of his investigations as follows: 1. Cachectic purpura appears in the form of petechiæ and of ecchymoses; the first are either pilo-sebaceous or cutaneous, the latter may be very extensive in area. The papular and erythematous forms are never seen in this variety of purpura. 2. The first group, that of excessive anæmia, is characterized by the frequency of œdema and hemorrhage. In this group may be included purpura of the cancerous cachexia and of the anæmia of miners. 3. In tuberculosis the purpuric eruption is caused by the secondary affections, such as meningitis, albuminuria, diseases of the liver, etc. 4. Purpura is a very frequent phenomenon in Bright's disease, and is to be regarded as of evil prognostic import, as it is generally the forerunner of uræmia and death. 5. In the cachexia of heart disease purpura may be induced by a variety of causes, such as albuminuria, pernicious jaundice, arterial sclerosis, œdema, and embolism.—*Schmidt's Jahrbücher*, May 20, 1884.

The Value as a Symptom of the Swashing Sound in the Stomach.—Chomel regarded this sound as a characteristic sign of a morbid condition which he called indigestion of fluids. He believed that the stomach was incapable of absorbing or of passing into the duodenum the ingested liquids or those secreted within the organ itself. These liquids accordingly accumulated within the stomach, and their presence was manifested by a succussion sound on shaking the patient. He considered this sound to be always a pathological phenomenon. These views were controverted by M. Andhoui in a note presented to the Paris Academy of Science (*L'Union Médicale*, July 12, 1884). He had made a number of experiments upon dyspeptic and healthy individuals, and had found the succussion sound always present immediately after the ingestion of a quantity of fluid. He concluded, therefore, that Chomel was wrong in believing it to be a pathognomonic sign of indigestion of fluids, or of any other gastric disorder.

Polyuria in Convalescence from Typhoid Fever.—The attention of Dr. Spitz having been attracted by the case of a convalescent from typhoid fever, who passed from three to four quarts of urine a day, he was led to study the subject more closely. He found, to his great astonishment, that polyuria, sometimes to a remarkable degree, was present in about half the cases of convalescence from typhoid. The amount of urine excreted was usually greater as the fever itself had been more severe. The urine is of a light yellow color, transparent, without sugar or albumen, and forming no special deposit. Its specific gravity varies inversely to the total amount excreted during the twenty-four hours. The polyuria begins at the period of greatest oscillations of temperature and persists up to the fifth or sixth week of convalescence. It would seem to be of favorable prognostic import.—*L'Union Médicale*, July 6, 1884.

Hypodermic Injections of Quinine in the Differentiation of Malarial from Typhoid Fever.—Dr. Annibale Arzelà employs quinine subcutaneously in doses of fifteen grains and more, according to the age and constitution of the patient, as a means of diagnosis between remittent and typhoid fever. If the disease be malarial in origin, soon after the injection a noticeable depression occurs in the temperature curve, which eventuates the next day, perhaps after another dose of quinine, in complete apyrexia. If the affection be typhoid fever the fall in temperature is merely temporary. It is necessary to give the quinine subcutaneously, as the intestinal mucous membrane is in such a condition that absorption of remedies administered per orem may not occur.—*Deutsche Medicinal-Zeitung*, vol. v., No. 50, 1884.

Treatment of Fractured Patella.—Dr. Van der Meulen notes that in the space between the two fragments of a broken patella, a clot of blood is formed. This clot is not organized at once in its entirety, but the anterior and posterior surfaces are first organized, and only after some time does the process involve the central portion. In this way the two fragments come to be united by two thin pseudo-membranes. The author takes advantage of this in his treatment of fractured patella. From ten to twenty days after the injury he proceeds to operate. An incision being made over the patella, the anterior membrane and the unorganized coagulum lying beneath it are removed, but the posterior membrane is not interfered with, and thus the joint is not opened. The fragments are then united by platinum or silver wire suture, care being taken not to include the membrane of organized coagulum, but to let it fold upon itself posteriorly toward the joint cavity. Dr. Van der Meulen has operated in this manner in three cases of fractured patella, and has been enabled to obtain excellent and firm union.—*Deutsche Medicinal-Zeitung*, July 21, 1884.

The Diagnosis of Sciatica.—M. de Beurmann advises, in any case where there is a question of diagnosis between sciatica and any other painful affection in the region of the hip, that the patient be placed on the back and then, the knee being held in complete extension, flexion be made of the thigh upon the trunk. When this is done, the patient at once complains of severe pain in the buttock at the point corresponding to the sciatic notch. If now the knee be flexed, no pain is experienced upon flexion of the hip. According to Lasègue this pain is caused by compression of the nerve by the surrounding muscles, but De Beurmann shows that it is due rather to stretching of the nerve trunk by the constrained position of the limb. This sign, more valuable than that of Valleix's tender points, is, the writer states, constantly present. It is moreover characteristic, for in other affections simulating sciatica the presence or absence of pain is not dependent upon the tension or relaxation of the nerve, consequent upon the varying positions of flexion and extension of the knee.—*La France Médicale*, August 2, 1884.

Treatment of Locomotor Ataxia.—Dr. Müller claims to have had a measure of success in his treatment of this affection. The diet, he says, should be strengthening. Coffee, strong tea, and undiluted alcoholic beverages are forbidden. In the medicinal treatment a pill is used composed of $\frac{1.5}{100}$ grain of nitrate of silver and $1\frac{1}{2}$ grain of extract of ergot. The dose is one pill three times a day, and is gradually increased to three pills three times a day. After about twenty grains of nitrate of silver have been taken, the pills are discontinued for three weeks, when their administration is then resumed in the same way. The treatment may extend over five or six months. The author does not believe that the disease is often of syphilitic origin, and never uses specific treatment unless he can discover unmistakable evidences of syphilis. Electricity is often useful, but galvanization of the medulla should be practised as well as that of the cord. Faradization of the skin by means of the brush electrode, either alone or combined with galvanization of the nervous centres, may also be of advantage. The author condemns hot water or vapor baths as being positively injurious. Cold baths are also contra-indicated. The proper temperature for a bath is 84° to 86°, and the patient should remain in the water for from three to five minutes only. Massage may prove to be of use, though data on this point are wanting. Stretching of the longer nerve-trunks is a dangerous and unwarranted procedure. For the pains Dr. Müller makes local applications of a liniment consisting of veratria, four grains; chloroform, half an ounce; and oil, one ounce. For the gastralgic crises he uses strong faradization with a brush over the epigastrium. Ocular paralysis is treated by the continued current. For the relief of vesical spasm, he gives pills containing one and a half grain of the extract of cannabis indica.—*La France Médicale*, July 31, 1884.

The Weight of the Heart in Cancerous Affections of the Uterus.—It has been stated by Dr. Artaud that the heart is hypertrophied in cases of carcinoma of the uterus, in consequence of secondary inflammation of the kidneys. In a series of post-mortem observations made to verify this assertion (*Le Progrès Médical*, August 2, 1884), Drs. Féré and Quermonne found that such was not the case. As the result of their investigations they conclude that, not only is hypertrophy of the heart not the rule in those suffering from renal lesions consequent upon cancer of the uterus, but that on the contrary, the heart, as is usually the case in cancerous subjects, whatever the seat of the lesion, is more or less atrophied.

A Case of Acute Iodism.—A gentleman in perfect health took a dose of fifteen grains of iodide of potassium in the hope of overcoming the disgust felt for it by his wife, for whom the drug had been prescribed. This occurred about six o'clock in the evening, and no evil effects were experienced until eleven o'clock, after he had retired. He was then suddenly awakened by violent sneezing accompanied by excruciating pain in the upper jaw. This was so severe as to drive the patient nearly frantic. The upper part of the face was somewhat swollen, and nasal respiration was impeded, though there was no discharge from the nostrils. The eyes were suffused without there being an actual flow of tears. There was also some nausea and vomiting. M. Léger, who was summoned about four o'clock, found the patient still suffering from constant pain, with exacerbations every few minutes, in the upper jaw and the teeth. This pain was not increased by pressure upon the infra-orbital nerves. The symptoms pointed to inflammation of the mucous membrane lining the two antra, but no cause could be found to account for its sudden onset, until the patient mentioned casually that he had taken a dose of his wife's medicine. The symptoms continued with but slight abatement until the following evening, and then slowly disappeared, leaving no sequelæ.—*Journal de Médecine et de Chirurgie Pratiques*, July, 1884.

Borax in the Treatment of Contagious Diseases.—In a communication made to the Académie des Sciences (*L'Union Médicale*, August 2, 1884), Dr. de Cyon urges upon the members the employment of borax as an internal disinfectant. It is, he asserts, perfectly innocuous to the human organism, even when taken in quantities of half an ounce or more per diem. He opposes the notion that a microbicide is the more effectual in proportion as it is the more poisonous to man. The efficacy of this substance as a prophylactic against cholera was demonstrated, the author says, during the cholera epidemic which ravaged Italy in 1865. At that time not one of the workmen employed in the seven boracic acid factories at Larderello was attacked, while in a village scarcely two miles distant one-third of the inhabitants died from cholera. Taken in quantities of seventy-five to ninety grains per diem, the borax would not only exert a direct action upon the microbes in the intestinal canal, but would be taken into the blood and destroy the organisms there present. The constipating effect of borax would be another indication as regards cholera. He recommends that those exposed to cholera should wash the mucous membranes frequently with a solution of boracic acid or borax, and also take about ninety grains of borax internally each day.

The Induced Current in the Treatment of Pleuritic Effusions.—Dr. Giuseppe Manzini has collected a number of cases of absorption of the fluid in chronic pleurisy after the persevering use of the induced current applied to the thoracic wall. In a few instances there was at first a little fever and a slight degree of inflammation, induced apparently by irritation from the electricity. Although these cases also terminated favorably, the author advises that the treatment be not undertaken until every trace of inflammatory action has subsided. The action of electricity in causing absorption is explained: 1, by the increased power of contraction in the intercostal muscles and diaphragm, previously weakened by the hyperæmia and œdema, which contraction exerts a pressure upon the fluid contained in the thoracic cavity; 2, by strong irritation of the vasomotor nerves, which restores to the tissues their absorbing power.—*Deutsche Medicinal-Zeitung*, July 10, 1884.

Malaria and Osteopathies.—Dr. Barberi-Boughini, in an article on this subject, notes the anatomical and physiological relations between the spleen and the medullary substance of the bones, and concludes that it is reasonable to suppose that when the former is affected by the malarial infection the latter is also involved. He calls attention to the frequency of non-union or slow union of fractures in malarious subjects, and mentions several instances in which he found melanotic disease of the medulla of one or more of the long bones in cases of hypertrophied spleen from malaria. He concludes that: 1. We should recognize the existence of leucocythæmia due to changes in the various bones. 2. The malarial poison may act by itself in inducing these changes, or may be a most powerful coefficient to the expression of other diatheses not yet determined. 3. Malaria ought therefore to be regarded as a cause of various osteopathies.—*Rivista Clinica*, July, 1884.

The Condition of the Blood in Hydrophobia.—In an examination of the blood drawn rapidly from the vessels, especially from the sinuses of the dura mater, Dr. Romiti (*Rivista Clinica*, July, 1884) found it to be of a dark red color and not coagulable spontaneously. The red globules were rather pale, and when the preparation was stained by Bizzozero's method, and placed under an immersion lens, there appeared a mass of granular matter in which the white globules seemed to be imbedded. These appearances were similar to those presented by the blood of persons killed by snake bites.

The Functions of the Thyroid Gland.—In an article in the *Archivio per le Scienze Mediche*, vol. viii., No. 10, 1884, Drs. Sanquirico and Canalis describe a number of experiments made by them to determine the function of the thyroid gland and its value to the economy. From the results of these experiments the authors draw the following deductions: 1. The extirpation of the entire thyroid gland in dogs is fatal, whether the spleen have previously been removed or not. 2. Dogs from whom the spleen has been taken away bear incomplete thyroidectomy without any apparent ill effects. 3. There is no functional relationship between the thyroid gland and the spleen. 4. Only a small portion of the thyroid requires to be spared in order that the functions proper to this gland may be actively performed and that there may be no change in the animal's general condition; though not yet positively determined, it would appear that the upper part of the gland is the part that must be spared in order not to interfere with its necessary functions. 5. The fatal results following complete thyroidectomy cannot be referred to quantitative changes in the elements of the blood, for the changes observed were neither constant nor of sufficient gravity. 6. Although the experiments thus far made have not demonstrated what the functions of this gland are, they are yet sufficient to exclude the notion of a hæmatogenetic action, and therefore to prove that the thyroid cannot, in this respect at least, be a substitute for the spleen. Nevertheless we are justified in assuming that it has an important action upon the animal, and in all probability in relation with the nervous centres. The authors have never met with an absence of the thyroid gland in any of the animals examined by them, although Tauber has asserted that the organ is quite frequently wanting in the domestic animals.

Sub-clavicular Tympanic Resonance in Pneumonia.—In a soldier suffering from acute double pneumonia, Dr. Lavéran (*L'Union Médicale*, No. 55, 1884) found a tympanic resonance under the left clavicle. This resonance persisted from the third day of the disease until the patient's death. At the autopsy the left lung was found to be throughout in a state of gray hepatization. Not being able in this case to admit the theory of Skoda and others, who explain this phenomenon by the integrity of the corresponding portion of the other lung, Dr. Lavéran concluded that the resonance was that of the trachea and larger bronchi transmitted through the solidified lung-tissue.

Purulent Conjunctivitis.—In a considerable number of cases of purulent ophthalmia Dr. Johan Widmark (*Hygiea*, No. 6, 1884) was able to demonstrate the presence of gonococci. The micro-organisms were generally found in the wandering cells, though they were also present in the secretion. In some cases of conjunctivitis of the new-born the author discovered the cocci in the epithelial cells. In one case also of ophthalmia in the adult they were present in the epithelial cells in the first days of the disease, but disappeared on the third day. The author concludes from this that, as is asserted by Welander to be the case in gonorrhœa, the gonococci are developed in the epithelium, and only later penetrate into the subjacent tissues. In every case Dr. Widmark was able to prove contagion, in adults, from the presence of the gonococci in the antecedent urethral discharge, and in the new-born from the presence of these organisms in the vaginal secretions of the mother. The results of treatment in the new-born were excellent, but the disease in the adult was very intractable. This difference the author explains by the statement that in the adult there is a layer of adenoid tissue beneath the conjunctiva which is wanting in the infant. The micro-organisms have a predilection for all glandular structures, and therefore pass deeply down into this subconjunctival layer out of the reach of local applications. In the treatment Dr. Widmark makes a strong application of nitrate of silver once a day, and washes the eye frequently with solutions of boracic acid and of corrosive sublimate ($\frac{1}{10000}$) employed alternately.

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CHOLERA AND THE COMMA-BACILLUS.

A VERY interesting lecture on cholera, an abstract of which is given in this and the preceding issue of THE RECORD, was delivered recently by Dr. Koch before an assembly of prominent physicians and hygienists in Berlin. The speaker described the minute organism discovered by him in the intestinal discharges of cholera patients, and which he maintains is the actual cause and essence of the disease. This organism has been called rather inaptly the comma-bacillus, although it resembles a mark of parenthesis more than it does a comma, and is probably a spirillum and not a bacillus. Dr. Koch makes out a very strong point in favor of the bacillus theory of cholera and of his claim to have discovered the special micro-organism that causes the disease. He found the comma-bacillus in every one of nearly a hundred cases of Asiatic cholera, while its presence could not be detected in cases of cholera morbus and other diseases in which a search was made. Nevertheless it would be rash to assert that it is not present in any other disease, and it may yet be found in other affections, just as Friedländer's pneumonic cocci are said to have been detected in inflamed tissues other than the lungs. Indeed, Dr. Klein, a London physician, has recently asserted that he found micro-organisms, indistinguishable from the comma-bacilli, in the discharges of patients suffering from a diarrhœa which was epidemic in Cornwall in 1883. As he made no culture tests, however, his statements cannot be accepted as conclusive. And more than this, the crucial test of a theory of this kind is wanting, namely, inoculation by the infectious material. Various attempts have been made to induce cholera in the lower animals by feeding them with matters containing the comma-bacilli, but always without success. Koch says that animals enjoy a special immunity against the disease; but while this may be a sufficient explanation of the failure of these experiments, it nevertheless leaves the main question of inoculability untouched.

Although it would be premature without further evidence to regard the problem of the cause of cholera as already solved, the possibility of Koch's solution being the correct one is nevertheless so great that it may not be unprofitable to consider some of the sanitary bearings of his theory.

The lecturer stated that the bacillus was found only in the intestinal canal and its contents, and never in any of the other organs or secretions of the body. Further than this, it was only in the lower portion of the digestive canal, the gastric secretion, when normal in character, being fatal to the life of the micro-organism. This point is of considerable importance, since, as the bacillus can gain admission only through the mouth, it must first run the gauntlet of the stomach before it can reach a locality favorable to its development. Thus, a healthy individual whose gastric secretions are normal in quantity and quality, is far less likely to contract the disease than is a dyspeptic. This might explain the influence of fear as a predisposing cause of cholera, since good digestion is so dependent upon a quiet mind. Hydrochloric acid and pepsine may yet rank high among the preventives of cholera.

A still more important statement was that the bacillus is absolutely dependent upon moisture for its life. There is no stage of its existence during which it may remain dormant for an indefinite time, ready for further development and reproduction under favoring circumstances. Once the material in which it is contained be thoroughly dried, then the comma-bacillus is dead and can never be resuscitated.

If this be so, the question of disinfection becomes a very simple one. All rags, clothing, or personal effects of cholera patients need but to be carefully dried, and they are thenceforth absolutely incapable of carrying contagion. In the same way letters could be dried, and the absurd precaution of enclosing them in tarred mail-bags might then be abandoned. The assertion that the infectious material of cholera cannot be carried in the air, but can only be transmitted to distant places by persons suffering from the disease or by articles soiled with choleraic discharges, will, if true, lend a measure of support to the establishment of sanitary cordons, and demonstrate the utility of quarantine. That the bacillus can flourish under favoring conditions outside of the human body, is amply demonstrated by the facts of cultivation in gelatine, milk, blood serum, potato, and other substances. Impure drinking-water would seem to be one of the most ordinary channels through which the contagion of cholera is introduced into the intestinal tract. Dr. Koch cited numerous striking cases showing the value of pure water in reducing the death-rate from this disease. He stated also that the comma-bacillus did not thrive in pure water, but died within a few days.

One of the most valuable results of the discovery of the cholera bacillus, even though it be proven not to be the real cause of the disease, provided only that it be peculiar to this affection and not present in any other, will be the facility thus afforded to a certain and early diagnosis. The value of this can hardly be over-estimated, for the first cases usually come singly, and if they can be promptly recognized and placed under surveillance from the very beginning, a destructive epidemic may be warded off. Whereas, if the first few days be spent in trying to decide what the nature of the disease is, by the time it is recognized to be cholera it may be too late to check its advance. Dr. Koch maintains that a simple microscopical examination of the choleraic discharges is not always sufficient to base a diagnosis upon, but that by the method of culture absolute certainty may be obtained. He looks upon this as a very simple matter, and seems to think that anybody can do it. But he appears to be a

little over-sanguine in this respect. It is hardly reasonable to expect that every physician will take the trouble, even if he has the time to spare, to acquire the skill necessary for conducting a trustworthy culture of the comma-bacillus. But practically, in cities at least, such a general knowledge of bacteriology is not necessary. The investigation of doubtful cases could be entrusted to the sanitary authorities, as is done now in other contagious diseases.

It is to be hoped that Koch will be able to substantiate his claims clearly and beyond dispute, for we shall then be on the high road to victory over this dreaded disease, and cholera will take its place alongside of small-pox as one of the former scourges of the human race from which modern civilization has little to fear.

GASTRIC HYSTERIA, AND THE FASTING GIRL OF FORT PLAIN.

The necessity of a suitable dietary regimen is seen in the fact that man, and warm-blooded animals generally, cannot survive abstinence from food longer than from seven to ten days; the period may be somewhat extended if water be supplied, and it may be very much prolonged if a minute quantity of nutriment be taken daily.

Cold-blooded animals can endure fasting for a considerably longer time; although some species (notably of fishes) are characterized by excessive voracity, and all are dependent for the normal performance of their functions on regular alimentation, it is nevertheless a fact that reptiles and amphibia have been known to live for many months without any food whatever. A gentleman, for whose veracity we can vouch, has reported to The Record a case of nine months' fasting in a couple of frogs;[1] and an alligator now in our possession has for more than ninety days refused all sustenance. Such warm-blooded animals as hibernate during the cold season are examples of a similar kind. In all these instances changed conditions in the environment have caused retardation—a quasi stagnation of the organic processes; assimilation and disassimilation are almost nil; animal heat is scarcely above that of the surrounding medium; secretion and excretion are at their minimum.

Although all active manifestations of life are the expression of change in the protoplasmi matter of life, necessitating constant waste and repair, yet there are all grades of vital action (and concomitant molecular change); from the "latent life" of spores and seeds and grains, of dried rotifers and tardigrades and certain infusoria, which are capable of existing for years in a state of physical and chemical torpor without maintaining any relations of exchange with their environment; to the instances already given of "life with oscillations" (the terms are those of M. Claude Bernard), where the condition is not one of absolute torpor and inertness, but one in which the vital manifestations are at a low ebb; to finally—what shall we take as our highest example?—to the indefatigable activity which characterizes that hardest-worked of human beings, a metropolitan newspaper editor.

There are in man certain morbid conditions which almost reduce the individual to the state of a cold-blooded or hibernating animal, as far as the ability to support deprivation of nutriment is concerned. Not to dwell on certain cases of cancerous stricture of the pylorus or cardia, where digestion and absorption are almost, if not quite, impossible, and yet where we have seen life maintained for many long weeks on the *nutritive reserves*[1] of the blood and tissues; there are certain cases of hysteria characterized by chronic repugnance to and inability to digest food; these cases are called by Huchard and Denian "gastric hysteria."[2]

We here say in advance that the intimate nature of this disease is still unknown to science. Protean as are the manifestations, we have not yet ascertained the nexus of its parts or the law of its unity. Believing, as we must do, that it has a definite patho-anatomical basis, we are forced to conclude that the morbid alterations are principally molecular, being a disturbance of interstitial processes of waste and repair. We are warranted in affirming that in gastric hysteria there is marked inhibition of those systemic processes through perverted nervous influence, the point of departure being a local irritation which, to the functions of organic life, becomes a paralyzing lesion.

In gastric hysteria either the appetite remains normal or nearly so, but food is vomited shortly after it is ingested, from atony of the digestive organs, and failure of the assimilative processes; or else the appetite is completely lost, while organic nutrition is at a stand-still; the aversion to food is invincible. In the former class of cases abstinence is in some sort instinctive, the patient dreading the distress and vomiting which follow eating. In the latter class there is also retardation of the processes of vegetative life, but there is a mental element which is conspicuous; as though the dread and disgust of food were a species of insanity, having a special seat in the brain. Huchard distinguishes these two varieties under the names of *gastric anorexia* and *mental anorexia*.[3] The mental anorexia of Huchard has been described by Gull, of England, under the name of *hysterical apepsia*; "an affection chiefly seen in young girls from fifteen to twenty-three years of age, and characterized by complete loss of appetite, by emaciation often attributed to latent tuberculosis, abdominal disease, or tabes mesenterica, and due especially to central cerebral disturbance."[4]

Other cases of gastric hysteria are distinguished by incoercible vomiting, which may be due to hyperæsthesia of the gastric mucous membrane, to pneumo-gastralgia, to secretory disturbances of the gastric glands, and to other causes.

All the neuralgic, spasmodic, paralytic, and other nervous troubles of hysteria in general, may accompany this form of hysteria, and be the key and the exponent of the malady. To cite one of multitudes of illustrative observations on record, we may refer to the very interesting case reported by Raymond in Vulpian's "Clinique Médicale," obs. clvi.[5] The patient was suffer-

[1] Medical Record, vol. xviii., p. 361, "Fasting Frogs."

[1] The term is a favorite one of the late M. Bernard.

[2] Huchard: Traité des névroses, Paris, 1883; Denian: De l'Hystérie gastrique, Paris, 1883.

[3] Huchard: Loc. cit.

[4] Gull: Brit. Med. Jour., 1873. (Quoted by Denian in Hystérie Gastrique.)

[5] Clinique Médicale de l'Hôpital de la Charité. Obs. Cliniques par le doct. F. Raymond. O. Doin, Paris, 1879.

ing from "ovarian hysteria;" entered the hospital to be treated for incomplete paraplegia which proved to be reflex; while in La Charité had gastric hysteria, vomiting everything; this was accompanied by choreiform trembling of the limbs, which lasted for several months; both the choreic agitation and the vomiting were very obstinate; there was sometimes alternancy of the morbid phenomena, one kind being in abeyance while there was exacerbation of another kind. The patient left the hospital unrelieved.

As for the length of time during which life may be maintained on such limited quantities of food as are assimilated in these cases, it is impossible to form an exact estimate. Dr. Carpenter relates an instance which came under his own observation: "A young lady who had just before suffered severely from the tetanic form of hysteria, was unable to take food for three weeks. The slightest attempt to introduce a morsel of solid matter into the stomach occasioned violent efforts at vomiting; and the only nourishment taken during the period mentioned was a cup of tea once or twice a day, and on many days not even this was swallowed. Yet the strength of the patient rather increased than diminished during this period; her muscles became firmer and her voice more powerful."[1]

Willen relates the case of a man who lived sixty days without taking anything but a little orange juice. Desbarreaux reports the history of a woman who during sixty-one days swallowed only one bowl of broth. And Desportes tells of a woman who during two months lived on water alone. Denian, from whom we borrow these not very well attested statements, after remarking the slowness of disassimilation in gastric hysteria, of which we have a proof in the minute quantity of urea which is excreted (in some instances scarcely thirty grains a day), goes on to observe that "alienists are every day witnesses of facts of persisted anorexia and abstinence supported with an immunity truly astonishing."[2]

The disposition to deceive which characterizes hysterical patients generally is not absent from the gastric form of the disease, and the cases of Anna Moore, Sarah Jacobs, etc., reported by Dr. Hammond in his "Fasting Girls," show us to what bizarre subterfuges these patients will resort to impose upon family and friends, and compel the belief that absolutely no nourishment of any kind is ingested.

A notable instance of simulated fasting, which had a tragic ending, occurred in South Wales in the spring of 1869 (*vide* newspapers of that period, heading "Fasting Girl of South Wales"). The parents made a show of their child, decking her out like a bride on a bed and asserting that she had eaten no food for two years. Some reckless enthusiasts for truth set four trustworthy hospital nurses to watch her; the Celtic obstinacy of the parents was aroused, and in defence of their imposture (or because they had allowed themselves to be deceived) permitted death to take place in eight days. Their trial and conviction for manslaughter are still fresh in the memories of inhabitants of that region.[3]

Whether the same result would follow a rigorous espionage, day and night, of the person and surroundings of the fasting girl at Fort Plain, is not in our mind at all uncertain. It would appear that Miss Kate Smusley has now been for almost six months "lying at death's door from self-starvation." She occasionally "takes a little water in her mouth, but does not swallow it, as this causes convulsions which wrench her stomach most painfully. . . . She recognizes her callers, and carries on conversations with them, and is perfectly conscious. . . . Her body is in constant motion, like a machine, so much so that the bed upon which she lies has to be supported for fear that it will fall to pieces by the constant vibration." Other non-medical accounts of a similar kind, based on asseverations of members of the family, are in circulation. We have a medical opinion of the case from the statement of a local physician whose name we charitably suppress, and who considers the case "one of spinal disintegration, or a species of locomotor ataxy, or a wasting of the nervous system!"

It is needless to comment on such an extraordinary view of a case which, as far as we have been able to inform ourselves concerning it, is clearly an instance of gastric hysteria, and presenting no single element that is essentially different from other cases of the kind, unless it be the persistent choreic trepidation, which seems to be a more obstinate and formidable phenomenon than in Vulpian's patient above referred to. There would seem to be a tetanic condition of the œsophageal muscles at times, making swallowing an impossibility. We can well believe that Miss Kate Smusley is a great sufferer and entitled to universal pity; that, however, there is fraud and imposture in the recital, as it comes to us, there can be no doubt whatever.

[1] Carpenter: Principles of Human Physiology, p. 86. Phila., 1862.
[2] Denian: Loc. cit., p. 55.
[3] See the account in the Encyclopædia Britannica, article Dietetics.

INTRAVESICAL INJECTIONS.

Of the many therapeutic measures in common use for the alleviation or cure of vesical troubles, few have such power for good, when rightly used, or such injurious effects when misapplied, as injections into the bladder. *J'en pense beaucoup de bien et beaucoup de mal*, said Guion, when questioned as to their value. Like most of the therapeutic means in the hands of the surgeon, whose value cannot be questioned, they are two-edged weapons—excellent, harmless, and productive of good results in experienced hands, but dangerous when entrusted to the inexperienced and ignorant. Hæmaturia, prostatitis, cystitis, and even nephritis are the troubles arising from misuse of them, troubles depending upon the *technique* of the injection, its nature, and its pharmaceutical composition.

Intravesical injections may be used in the most diverse conditions, and to obtain essentially different results; for a simple mechanical action, or for a modifying dynamic action on the bladder or its contents, or as very necessary aids in certain operations upon the bladder.

Evacuating injections or washes may prove valuable mechanical aids by acting mechanically on foreign substances in the bladder, and causing their expulsion. The substances to be removed may be gravels or fragments of calculi, or purulent or glairy masses which, on account of their weight or adhesive power, cannot be

expelled by the forces of micturition. It is well known that in cases of pyluria, the last urine expelled contains more pus than the first, often consisting of almost pure pus; and the unexpelled contents consist of pus, or at least urine mixed with pus, which stagnates in the bladder. Now, there is scarcely a surgical principle more universally admitted than that every suppurating surface should be placed under conditions favorable for cleanliness and drainage. This is the underlying principle of detersive vesical injections, which are indicated whenever the urine contains pus, and especially when the pus is secreted by the vesical mucous membrane. So, also, when the urine undergoes ammoniacal fermentation, or there are solid blood-clots in the bladder.

As with other measures which are powerful for good, vesical injections have their contra-indications, of which pain may be mentioned first. The injection should not cause any considerable degree of pain, nor should the bladder be distended by the fluid. After pain, acute renal lesions contra-indicate detersive injections. We do not say chronic lesions of the kidneys, because in that case they would be almost entirely thrown out of vesical therapeutics.

It would scarcely be considered necessary to say that metallic catheters should never be used for this purpose, unless we had seen it done. Furthermore, Desnos has shown, in his *Lithotritie à Séances Prolongées*, that an evacuating tube should have two eyes, both for lithotrity operations, and for washing out the bladder. The reason for this is apparent: the contents of the bladder should be as much agitated as possible during the injection, and it is easily seen that a tube with two eyes will create a double current, which the single eye cannot. The double-current canula, formerly much used, is decidedly disadvantageous on account of the necessarily small calibre, its inability to set up a double current, and the insignificant attraction at the external orifice. But of all syringes for vesical injections the hydrocele syringe is probably the best. Whatever syringe may be used, however, and however carefully it may be graduated, the amount of liquid thrown in should only be judged of by the resistance of the bladder; and the injection cease at or before the first manifestation of vesical resistance.

As it is always unwise to empty a distended bladder, unless the patient is in the recumbent posture, so vesical injections should always be made while he is lying down. As to the materials for vesical injections, it may be said in a general way that nothing should be used which can possibly do injury, either directly or indirectly. For antiseptic injections solutions of carbolic or boracic acid, resorcine, corrosive sublimate, and strong tea, are all excellent. Nitrate of silver has been much used in this country, and is still used in France; but the less of that material thrown into a bladder, so much the better for the patient.

THE DEVELOPMENT OF CANCER FROM CICATRICES IN THE STOMACH AND GALL-BLADDER.

The question whether cancer may have for its starting point simple ulceration and subsequent cicatrization, has been frequently raised in connection with gastric ulcer. While Rokitansky and Dittrich merely affirm that there are cases in which cancer has followed upon ulceration, Lebert sees in the not infrequent coexistence of gastric ulcer and carcinoma (9 per cent. of his own observations) more than a chance occurrence. And Leube ascribes to the presence of an ulcer or its cicatrix a certain predisposition for the development of cancer. In a monograph on chronic ulcer of the stomach, its cicatrization, and its relationship to cancer, reference to which was made in these columns in September of last year, Dr. Hanser has shown that the glandular changes induced by the cicatricial process occasion a predisposition to cancerous growth, and that between the cancerous growth of the glandular epithelium and its atypical growth in the course of cicatrization there is but a very slight difference. Dr. M. Heitler, of Vienna, agrees with these views, and in confirmation of their correctness cites three cases with autopsies, in which cancer had arisen from the cicatrix following ulceration. This author further states that the same thing may occur in the gall-bladder as in the stomach. In opposition to Frerichs, Förster and others, who regard the presence of a cancerous tumor as favorable to the formation of gall-stones, Klebs and Schüppel regard rather the irritation caused by the presence of biliary calculi as favoring the development of carcinoma. Dr. Heitler is led to agree with the latter by reason of his own experience, which though limited to a single case of this kind, he holds to clearly establish the correctness of the view of Klebs and others. He asks finally whether, with this experience, the appearance of cachexia (especially when there is unhereditary history of cancer) should not be regarded as an indication for operative interference.

THE ASSOCIATIONS FOR THE ADVANCEMENT OF SCIENCE.

The annual meeting of the British Association for the Advancement of Science, at Montreal, last week, and that of the American Association, at Philadelphia, this week, have attracted unusual attention. Both meetings have been interesting, and have fairly served their purpose of giving opportunities for social intercourse and mutual interchange of opinion.

It sometimes occurs that subjects of much interest to medical men come up in the Sections of Biology or Anthropology. Such has not been the case this year, and we much regret the fact. It is noticeable that in both France and Germany there are scientific associations in which the medical sciences form a prominent part. Such is the case with the French Association for the Advancement of Science, and the German Society of Naturalists and Physicians. It would be better if certain of the medical branches were to ally themselves to these associations for the advancement of science. Certainly pharmacology, physiology, pathology, and anatomy are as legitimate and important sciences as any that at present receive attention.

INDIANA MEDICAL AMENITIES.

An interesting controversy is going on between the *Indiana Medical Journal* and a Fort Wayne medical contemporary. The latter publication is opposed to the establishment of a Board of Medical Examiners independent of the colleges, and to the *Indiana Medical Journal*

being made the organ of the State Society. It intimates that those medical gentlemen who are not connected with a medical college are too ignorant to be State examiners—an opinion which has been modestly advanced by learned professors in our own neighborhood. To this the *Indiana Medical Journal* at once applies an *argumentum ad hominem*, quoting from an article by the learned Fort Wayne editor, who, it is needless to say, is a full-fledged professor in a second-rate medical school. It is shown that said professor advises the administration of three grains of quinine and three grains of Dover's powder every three hours as a "bitter tonic" to a child two years old. He also gives this dose in the form of a seven-grain capsule, the whole prescription being written in what might be called dog Latin, and displaying a massive ignorance of therapeutic knowledge and literary skill.

The *Indiana Medical Journal* has been making a good fight for reform in professional education and ethics in the State of Indiana. It is right in its position as to the State Medical Examiners, even if its somewhat personal method of argumentation is not conclusive. Indiana needs a good independent State Board of Medical Examiners much more than it needs any of the literary or educational productions of Fort Wayne.

CONTAGIOUS PLEURO-PNEUMONIA.

Contagious pleuro-pneumonia has already infected several herds in the West, although the total number of its victims is still small, not exceeding fifty. Much to the dismay of the milk-dealers, it has been found to exist in an unequivocal form also in Brooklyn. The disease has been present at several points in the Eastern States for a long time, and there is no doubt that it was carried West from some Eastern herd.

The attempts to throw doubt as to the true nature of the disease, are simply the expressions of obstinacy and dulness. The disease is contagious pleuro-pneumonia—a thing not to be trifled with.

The history of the progress of pleuro-pneumonia in this country of late years has been a curious illustration of the advance of scientific knowledge before public opinion. No competent persons (except a few "inoculationists") doubt that the only way to treat pleuro-pneumonia is to kill every animal that has the disease, and quarantine those that have been exposed. This is the cheapest way in the end, but it has been very hard to show legislators that such is the fact. In the State of New York the Legislature has abandoned its special machinery for dealing with cattle diseases, and there are now only the State and Local Health Boards. The congressional mind has never been able to comprehend the situation, although Congress alone is able to purge the country of the disease.

Pleuro-pneumonia is a most inviting disease for the pathologist to study. It has a special contagion of persistent vitality, but generally of slow development. It produces a local disease wherever it fastens itself, but normally the affected places are the bronchi and air lobules. Here we have a bronchitis, peribronchitis, consolidations, hemorrhagic infarctions, and pleural effusion.

The general features of the disease, however, were described in The Record some time ago and need not be repeated now.

News of the Week.

A Tribute to Marion Sims.—*L'Union Médicale* of August 16th devotes its feuilleton to an account of the life, work, and character of the late Dr. Marion Sims.

Symmetrical at Least.—In Italy cholera attacks the peasants, the peasants attack the doctors, and the doctors attack the cholera. The cholera seems to be coming out ahead, perhaps the peasants come next.

Dr. Oliver Wendell Holmes celebrated his seventy-fifth birthday on August 29th. He received the congratulations personally, by mail, and by telegraph of a large circle of friends and admirers throughout this country and Europe.

Appointments in the Faculty of Medicine of Paris.—M. Lannelongue has been made Professor of External Pathology in the Faculty of Medicine of Paris. M. Armand Gautier has been made Professor of Medical Chemistry in the same faculty.

A New Medical Author.—A contemporary says: "Jahrbuch reports the treatment of forty-three cases of diphtheria with oil of turpentine." Dr. "Jahrbuch" had excellent results. We are reminded of the Freshman who inquired at the library for the works of "Ibid."

The Treatment of Dysentery by Corrosive Sublimate and Colocynth.—Dr. F. Sieber, of Chicago, Ill., writes us, calling attention to the fact that the method of treating dysentery advocated by Dr. S. W. Childs in The Record of August 23d is no new thing, but was described in The Medical Record, vol. xiv., pp. 45 and 194.

The Cholera continues to spread in the Pyrenees villages and has finally reached Madrid, Spain, where it has caused great consternation. It has also extended itself still further through Italy, having infected eleven provinces already. The total number of deaths from cholera up to September 4th is over 5,000. The cholera is now killing about one hundred persons a day, if the telegraphed reports are correct.

The Death of Dr. J. Collis Browne is announced from London. He formerly belonged to the medical staff of the British Army, and devised the well-known preparation "chlorodyne," for the cure of diarrhœa and similar diseases prevalent in the tropical possessions of England. Although the remedy was largely imitated and counterfeited, it is said to have secured great wealth for its inventor.

A Mild Form of Hydrophobia.—There seems to be little doubt that the following curious series of events occurred near Eufaula, Ala. On July 25th a dog on a plantation bit a mule and several hogs; nineteen days later the mule and one of the hogs died with the symptoms of tetanus. Within the next week three more of the bitten hogs died with the same symptoms. The dead hogs were eaten by some thirty negroes, about half of whom were within ten or fifteen days attacked with what Dr. Johnson, the attending physician, calls "a mild form of hydrophobia."

Death of Dr. Robert J. Heinmuller.—We regret to announce the death of Dr. Robert J. Heinmuller, on

August 30th, at his home in this city, of apoplexy. He was twenty-nine years of age, and a graduate of the University Medical College. Since 1881 he had been connected with the Health Department, and held the position of Assistant Sanitary Inspector in the Bureau of Contagious Diseases. He was a member of the County Medical Society, and of the Physicians' Mutual Aid Association. He had been an interne at Bellevue Hospital, and was for a time well known as a quiz master.

Some Dubious Advice Regarding the Cholera.—A French doctor being applied to by his mother-in-law for a receipt to keep off the cholera, recommended the following prophylactic regimen: Sit for a quarter of an hour morning and evening in a strong draught. Drink at each meal a bottle of adulterated wine. Eat two green melons at breakfast, the same number at dinner. Walk in the sun with the head uncovered for an hour every noon. Get yourself into a violent perspiration, then drink a pitcher of ice-water and sit in the cellar in a chemise. Drink ice-water every hour that it is hot. Le culte de Venus matin et soir. If you have any early symptoms of cholera, don't believe it.

The Danger from Chinese Lepers.—Says *The Pacific Medical and Surgical Journal*: "Since the foundation of the State of California, thirty-five years ago, Chinese immigration has gone on, with the introduction of occasional cases of leprosy, and in all those years, comprising more than a third of a century, only one doubtful case of leprosy has been found to prove the risk of the disease extending to the white population. The subject has more than once been considered by the State Board of Health, and not a solitary instance has been reported from any part of the State." It is interesting to compare this statement with the history of leprosy in the Sandwich Islands, where the disease has spread so disastrously.

Home Criticisms of the American Institute of Homœopathy.—The *New York Medical Times* (homœopathic, in a measure) charges the American Institute of Homœopathy with being a machine-ridden and obsolete institution which has outlived its usefulness. It calls upon it to renounce its title or disband, and states what is now very well known, that "homœopathic colleges," "homœopathic publishers," "homœopathic pharmacies," etc., cling to their distinctive name because it is a trade-mark without which they would become extinct. When the leading homœopathic (we beg its pardon) journal of the country talks in this bold way, we opine that the end is near. Homœopathy should be taught in all medical colleges as a branch of historical medicine, or psychological therapeutics. In that direction matters are rapidly tending.

A Case of Yellow Fever was discovered in this city last week. The patient was picked up in an unconscious condition on the street, and no history of his illness could be obtained. From his appearance it seemed probable that he was a sailor. He was taken to the New York Hospital, where he continued semi-comatose, but developed a high temperature. Symptoms of black vomit, yellow skin, and subcutaneous hemorrhage appeared. He died the next morning. Post-mortem examination revealed a yellow, mottled liver, hemorrhage in the stomach and intestines as well as in the lungs, enlarged spleen, and yellow kidneys. The black vomit, the pronounced yellow staining of the skin, and the subsequent discovery of gastro-intestinal and pulmonary hemorrhages justify the diagnosis which was made. For further particulars we refer to the report of Dr. Francis E. Dwight, House-Physician to the New York Hospital, on page 264. Since the occurrence of this case reports of two others in Brooklyn have appeared in the daily papers, but these lack confirmation.

The First Manufacturer of Pepsin.—At the meeting of the American Pharmacological Association at Milwaukee, last week, Mr. Henry Biroth, of Chicago, exhibited several bottles of a preparation called "pepsan," which he believed to be of historical interest. The preparation, he said, was put up in 1853 by one Eben Owen, of Chautauqua County, N. Y. Owen lived the life of a hermit, and was generally spoken of as "Crazy Owen." When he died his cabin was found to contain several packing cases filled with bottles of the preparation which he called "pepsan," and which he had put up himself. Accompanying the stuff were printed circulars quaintly worded as follows:

Pepsan, for the cure of dyspepsia, jaundice, liver complaint, together with all diseases arising from a disorganization of the stomach. This, I believe, is the gastric juices of the stomach of the ox producing the gastric juice required by man to digest his food. Prepared by Eben Owen; by no other, I believe, in this world. Directions for using: Take a small half-teaspoonful fifteen minutes before eating in a half gill of cold water. My advice is to eat light suppers. This is got up under prayer, and will do good I believe. Eben Owen.

April 25.

Mr. Biroth stated that the so-called "pepsan" was what is now known as "pepsin," and intimated that the valuable aid to digestion now known and used by dyspeptics the world over was originally discovered and manufactured by "Crazy Owen."

Veratria in the Treatment of Muscular Tremors.—Dr. Feris has employed veratria in a number of cases of tremor from alcoholism, in convalescence from typhoid fever, and in multiple sclerosis In every case the tremor was quickly overcome, but in the last instance the improvement was only temporary. From his experience in these cases the author formulates the following conclusions: 1. Veratria cures muscular tremor occurring in alcoholism and in certain nervous affections. It will probably cure all forms of tremor, but is especially serviceable in that of alcoholism. 2. The effects of the remedy begin to be manifested within twenty-four hours. 3. In cases in which veratria is of avail it overcomes all tremor, not only of the hands but also of the tongue, lips, etc. 4. The influence of the treatment is prolonged. The author has seen the relief persist for two months. The dose is four pills per diem, each pill containing ½ milligr. (about $\frac{8}{1000}$ grain of veratria).—*Rivista Clinica e Terapeutica*, No. 6, 1884.

Potash Chlorate in Gonorrhœa.—Dr. J. Milton (*Medical Age*, April 25, 1884) states that he has had excellent results from the internal use of the following mixture in ordinary cases of gonorrhœa: Potash chlorate two drachms, boiling water four ounces. Mix and shake till solution is accomplished; then add potass. acetat. two drachms, spirits of juniper four drachms, camphor mixture six ounces. M. S. Dose, a tablespoonful twice daily.

Reports of Societies.

THE INTERNATIONAL MEDICAL CONGRESS.

Eighth Session, held in Copenhagen, Denmark, August 10 to 16, 1884.

General Summary of Proceedings.

(From our Special Correspondent.)

Copenhagen, Denmark, August 18, 1884.

On Saturday, August 16th, the president of the Eighth Session of the International Congress bade adieu to the members, and in a few simple and evidently heartfelt words, closed the series of most successful meetings which have just been held at Copenhagen.

The old French custom, which is expressed by the words, "Le Roi est mort, vive le Roi," was here improved upon. The reigning Congress was not yet dead before its successor was decided upon and proclaimed. After Professor Panum had delivered the closing general address (see page 203),

ON THE INVESTIGATIONS OF FOOD RATIONS FOR MEN IN A STATE OF HEALTH AND DISEASE,

the report of the committee upon the invitation

TO HOLD THE NEXT CONGRESS AT WASHINGTON, IN SEPTEMBER, 1887,

was read, and, as already cabled, adopted.

There were a great number of excellent papers read, and important discussions held in the different sections, the results of which will soon be laid before the medical world.

A VERY LARGE ATTENDANCE.

In a previous letter reference was made to the opening proceedings; but it was not till the meeting was well advanced that a reliable estimate could be formed as to the character and dimensions that the gathering would ultimately assume. No one, and least of all, apparently, those who were organizing the matters here in Copenhagen, had the least idea that the Congress would attract the numbers it had done.

By Wednesday morning, when the sittings of the sections were suspended for

THE EXCURSION TO ELSINORE,

the membership had grown to between sixteen and seventeen hundred, and the number of foreign members who had been attracted to the great Congress of 1881 had been greatly exceeded. This unexpected development, so far as regarded the membership of the Congress, would be sufficient to account for any hitch which might occur in the organizing machinery. Nobody, accordingly, was disposed to be over-querulous by reason of the fact that

THE LODGING CAPACITY OF THE DANISH CAPITAL

was felt to be uncomfortably straitened. The least satisfactory result was seen in the sectional arrangements, which will probably make the preparation of the Congress transactions very difficult, if not impossible, of complete attainment. From the same causes which were at work in this last respect, representatives of the several medical journals found it more than usually difficult to gather up anything like a complete résumé of the sectional proceedings.

SECTIONAL WORK.

For the English-speaking members, however, interest centred most largely in the sections of surgery and medicine; and in the case of these two I shall be enabled to present in The Medical Record sufficiently full and reliable abstracts of the papers and debates.

HOSPITALITIES.

As to the hospitalities and courtesies, these at no time showed signs of break-down. The private hospitalities of the Danish physicians will live long in the recollection of their special recipients. But of the unfailing courtesy, kindliness, and even exuberant hospitality shown to every member of the Congress by the king, profession, and people alike, the memory will only die with the life of each and every member. The king showed from the beginning to the end of the meeting his warm appreciation of the intellectual distinction which its presence conferred on his capital. His presence added lustre to the opening meeting of the Congress, his kindly and generous goodwill gave the members the pleasure, on the Wednesday, of

A VISIT TO ELSINORE,

which will not be readily forgotten, and, on the Friday evening extended to them the honor and enjoyment of a reception and supper at the palace of Christiansborg, at which the king and queen, and all the members of the royal family were present. The dinner given by the municipality on Thursday evening may be described, for want of a better adjective, as also right royal in character; and the popular appreciation of the work of the Congress and its representative men, was completed by the fête given to the members in the Tivoli Gardens on the same evening, and by the farewell feast given on the night of Saturday in the national establishment.

[The scope of the general addresses has been indicated by summaries which have been sent by cable. In two of them—those, namely, of Sir William Gull and of Professor Panum—as already stated, proposals were made for collective investigation. Professor Panum's proposition did not result in any definite action on the part of the Congress. But in the case of

THE COLLECTIVE INVESTIGATION OF DISEASE

a different course was taken and the following committee was appointed: Professors Trier and Lange, of Copenhagen; Drs. Bull, of Christiania; Rauchfuss, of St. Petersburg; Schnitzler, of Vienna; Pribram, of Prague; Bouchard, of Paris; Lepine, of Lyons; Ewald and Bernhardt, of Berlin; Sir William Gull, Professor Humphrey, and Dr. Mahomed, of England; Sir Joseph Fayrer, London (India); Professor Jacobi, of New York; Dr. Davies, of Philadelphia; Dr. Goutteriez Ponce, of Colombia; Professor Despine, of Geneva; and Dr. Isambard Owen, of London, Secretary General.]

As to the work of the sections, it has already been indicated that the section on surgery was the one in which centred the chief interest of the meeting. Here, perhaps, the most important discussion was that which took place on

THE LISTERIAN SYSTEM OF ANTISEPTICS,

and which, while it showed the continued existence of a sincere and general acceptance of the principles underlying antiseptic surgery and admiration for its author, at the same time exhibited an immense variety of opinion and practice as to the methods after which surgeons seek to follow out their principles.

Interesting and important discussions were held on the paper of Mr. MacEwen, of Glasgow, on

OPERATION FOR GENU VALGUM,

this particular debate being remarkable for the almost complete renunciation of their own methods by other surgeons in favor of Mr. MacEwen's; on the paper of Whitson, of Glasgow, on the treatment of club-foot; on a paper of Professor Ollier, of Lyons, on the operation of arthrotomy for tuberculous joint affections; and on the subject of extirpation and other operations for the cure or relief of malignant disease of the rectum, introduced

in a remarkable communication by Professor Esmarch, of Kiel.

In the medical section there was a comparative absence of large debates on subjects of a very general interest, except perhaps in the instance of the questions of

TUBERCULAR PATHOLOGY AND TREATMENT,

and on the

MALARIAL INFECTION IN MAN.

The first-mentioned discussion was noteworthy chiefly on account of the declaration of Professor Jaccoud, of Paris, as to the

ALMOST UTTER STERILITY, FROM A CLINICAL POINT OF VIEW, OF DR. KOCH'S DISCOVERY OF THE BACILLUS TUBERCULOSIS.

Further observations might, he said, be followed by more encouraging results; but so far at least the discovery had borne no fruit in the treatment of the disease.

In the same section some progress was made in the report of Dr. Austin Flint's committee, in regard to the question of the establishment of a

UNIFORM NOMENCLATURE OF AUSCULTATORY SOUNDS IN THE DIAGNOSIS OF DISEASES OF THE CHEST.

The like question of international uniformity of nomenclature came up in the section of gynecology and obstetrics on the report of Professor Simpson's committee; and in this case the section reaffirmed the importance and desirability of the object in view, and reappointed the committee for further consideration of the question and report to the next Congress.

Of the other work in this section that which excited most interest was a prolonged debate on the question of

TREATMENT OF UTERINE FIBROMATA BY LAPAROTOMY,

introduced by a paper by Dr. Koeberle, of Strassburg, and on kindred subjects of abdominal surgery—the debate being taken part in by, among others, Professor Eustache, and Dr. Apostoli, of Paris; Dr. Margary, of Turin; and Sir Spencer Wells, of London.

Of the other sections that of skin diseases perhaps came next in interest. Here again the question that most excited debate was that as to the

TUBERCULOUS CHARACTER OF THE LUPUS.

Professor Kaposi, of Vienna found himself practically alone and unsupported in the negative view of this question, as against Professor Doutrelepont, of Bonn; Dr. Lelair, of Paris; Professor Nierser, of Breslau; and Professor Lang, of Insbruck. Of special interest was a communication by Dr. Goldscheider on the

SPECIFIC SENSIBILITY OF THE SKIN.

Prolonged consideration and discussion of different phases of syphilis was given rise to by a paper by Professor Pick on

EXCISION OF THE INITIAL SCLEROSIS IN SYPHILIS,

and other communications.

Questions as to tubercular conditions cropped up in others of the sections, as in that of pathology and morbid anatomy, the impulse to the discussion being given by a paper of Professor Chauveau, of Lyons, on the

IMPORTANCE TO BE ATTACHED TO TUBERCULOSIS IN DOMESTIC ANIMALS, CONSIDERED AS A SOURCE OF TUBERCULOSIS IN MAN,

and a relative paper by Professor Bang, of Copenhagen.

In the same section Sir William Gull and Professor Cornil, of Paris, read papers on

NEPHRITIS AND ITS SPECIAL TISSUE-CHANGES.

In the section of ophthalmology of special importance was a paper of Professor Holmgren, of Upsala,

ON THE COLOR SENSE;

as to which several new and interesting points were brought forward. Another matter of interest in this section was

THE INFLUENCE OF JEQUIRITY IN GRANULAR CONJUNCTIVITIS AND PANNUS;

and of interest were papers on "Latent Squint," by Drs. Hansen-Grut, of Copenhagen, and Noyes, of New York.

THE SUBJECT OF REFRACTION

was introduced in a paper by Professor Schmidt-Rimpler, of Marburg, who detailed a new method of estimating refraction by means of the ophthalmoscope. The subject was well discussed from a practical point of view by Noyes, Berry, Juler, Sattler, and others.

THE FEATURES OF THE WORK IN THE SECTION OF LARYNGOLOGY

which were of practical interest were found in papers of Dr. F. Lemon, of London, on an "Etiological Classification of Motor Impairments of the Larynx," with a relature by Dr. Cadier, of Paris, on "Paralysis and Pareses of the Larynx."

Dr. Lefferts, of New York, read a very interesting paper on the "Operative Removal of Foreign Bodies from the Air-passages."

Dr. Cohen read a paper on "Prognostic Significance of the Several Local Manifestations Observed in Tuberculosis of the Larynx."

In military medicine, Dr. Schmulewitsch's paper was one of interest; but some subjects put down in this section were discussed in the surgery section by the two sections jointly, viz., those on antiseptics.

OPERATIVE TREATMENT OF MALIGNANT RECTAL AFFECTIONS.

PROFESSOR ESMARCH, in his paper on this subject before the surgical section, laid down the same principles of treatment for cancer of the rectum as for cancer elsewhere. Removal of the disease must be early and entire. Cases were usually recognized too late, being earlier treated as piles, and a rectal examination too long deferred. The affection was painless in the early subject. Experience showed that after early and total removal a permanent cure resulted. The lymphatic glands were affected late and rarely. Czerny had cases of permanent recovery, although the disease had existed for three years. The prognosis was, therefore, good. First, as to principle, the amputation of the rectum above the limits of the disease was in every case indicated. The dangers were hemorrhage—which was to be controlled by care, double ligature of all vascular parts divided—and infection, which was to be guarded against by irrigation and drainage. To permit the fæces to pass, a large rubber drain was needed, surrounded by sublimated gauze. The peritoneum must inevitably be opened where amputation was high. Modern methods had reduced the mortality to twenty per cent., and the troubles resulting from the operation were insignificant. Suture of the two ends together was bad, causing gangrene and stricture. The anus and sphincter were to be left, and the coccyx need not be excised for space.

PROFESSOR VERNEUIL said he had done his first colotomy thirty years ago, and his first extirpation fifteen years ago. He at once found the removal of the disease was impossible, the patients objected or refused in many cases to allow the performance of colotomy. He then found the

incision of the cavernous stricture removed all complications and gave all the other advantages of colotomy. The whole length of the stricture must be split. The incision was made from the tip of the coccyx by a thermal cautery plunged in to meet the tip of the finger hooked above the stricture. Through this channel, by a canula, if necessary, an écraseur chain was passed, and the rest of the division completed. No blood was ever lost, and symptoms at once ceased. No deaths followed.

Professor Trélat denied the advantage claimed for the rectal extirpation, and pointed out the rapidity and malignity of the recurrence. He quoted one case, which he said was the type of many, where the removal of the cancer early, and when extremely small, was followed by a speedy and malignant recurrence. In one case he found, though the operation was normal and extra-peritoneal, that he had the small intestine in the artificial anus, and the patient died. He laid stress upon the color of the intestine, as the only part of recognition that did not deceive, being white or grayish white.

Mr. Sampson Gamgee, of Manchester, preferred the operation of inguinal colotomy, while admitting that the other operations had their indications, but that no one could dominate.

Mr. Marshall, of London, in support of the statements of Professor Verneuil, mentioned some cases where sinuses had been kept open in the peritoneum by tangle tents.

Professor Volkmann, of Halle, observed that colotomy, even in Mr. Bryant's hands, was a very dangerous operation, and that the statistics of extirpation were better than those of the colotomy of Bryant. Cancers, he said, varied in rapidity and malignity, according to their locality, and in the rectum they had little tendency to infiltrate early and recur soon. Even in desperate cases he had no return under long periods, in one case not for ten years. In chronic irritation a barrier surrounded the infiltrated carcinoma recti. The results of rectotomy had improved, and would go on doing so with improved *technique*. Asepsis and disinfection were normally powerful when the peritoneum was not opened; but when this was opened the dangers were great, and cleansing difficult. But dangerous as extirpation was, it was not so bad as colotomy, and recurrences were painless and not troublesome. The comfort of patients was also infinitely greater than it was after colotomy, discomfort being hardly felt save in diarrhœa. The selection of the cases, he went on to say, was also important, and he did not operate in any case where he could not reach the upper end of the disease by bimanual exploration under anæsthesia. The incision should be both forward and back to the coccyx, the anus alone being left, and no attempt should be made to unite the upper with the lower end, which should be stitched well down, and the cavities at the sides well drained. Extirpation he characterized as a blessed operation.

Mr. Henry Morris, of London, went over the English reasons for preferring colotomy in the lumbar region.

Professor Küster said that in extirpation he always stitched down when the peritoneum had been opened. He used iodoform in some cases, with temporary benefit. Cauterization was a proceeding from which good results were obtained in most of the cases where a permanent cure could not be expected. He would select either that or extirpation—very seldom colotomy.

Professor Pacquet, of Lille, read a paper on

UNILATERAL HYPEROSTOSIS OF ALL THE BONES OF THE HEAD,

excision of the upper jaw, and arrest of the hyperostosis in all the other bones; and he showed a preparation demonstrating the excision.

Professor Trélat, at the conclusion of the demonstration, observed that whatever might be said for the theory of the operation, the specimen shown to the section was one simply of osteo-myelitis.

Professor Pacquet thereupon made some amusement, withdrew the specimen as having been submitted by mistake, and showed another, which he declared to be the proper one.

Dr. A. Van Derveer, of Albany, read a paper on the

TREATMENT OF THE INTERMAXILLARY BONE IN CASES OF CLEFT PALATE

with double harelip.

Dr. Reginald Harrison, of Liverpool, read a paper on the

TREATMENT OF CERTAIN CASES OF PROSTATIC OBSTRUCTION BY SECTION OF THE GLAND.

Professor Volkmann said that drainage through the perineum, without incision of the prostate, was sufficient, and that the prostate afterward shrunk.

EXCISION AND ARTHROTOMY IN TUBERCULOUS JOINT DISEASES.

Professor Ollier, of Lyons, read a paper on the above subject, containing a general examination of the extent and results of resection and similar operations in tumor albus. Dealing with arthrotomy, he said there were no new operations. It was easy in superficial articulations and difficult in others. Drainage was often difficult, but could, however, be effected by canalization of the joints and foci of the affection. If undiscoverable they must be left. He laid great weight on the use of the cautery in the operation of arthrotomy. He admitted that resection beyond the epiphysial cartilages yielded deplorable results. Arthrotomy was better in young children. Amputation was no shield against the generalization of the tuberculous condition, for the infiltrated glands were left in every case.

Professor Chiene, of Edinburgh, wished to say a few words on this subject, on account of the large experience they had of this condition in the Edinburgh schools. He divided the cases for operation into two classes, one with sinuses and open, and one without sinuses and with unbroken surface. But practically each joint must, he said, be considered by itself. About four of these joints—the shoulder, elbow, knee, and ankle—there was no difference of opinion, the general view being that excision, with the gouge if necessary, was the proper treatment in the case of the shoulder and elbow; while in the case of the knee it was excision or amputation; and of the ankle amputation. About the wrist he was undecided. Canalization was, however, useful about the wrist.

Professor Volkmann said he spoke unwillingly, as the opinions were so irreconcilably different; that much mutual study, especially of Professor Ollier's paper, was needful before deciding. He opposed the views of Professor Chiene. He believed all scrofulous joint disease, spinæ ventosæ, etc., were tubercular, as experiments in infection and observation of the bacillus proved. In every case he had found Koch's bacilli. If that were true, then the treatment was clear. Spontaneous cure might happen, but the patient was always in danger of generalization of the condition. Further, all local recurrences were due, not to the system, but to remains of the foci left at the operation. If all were removed, as in amputation, then the wound never became infected, but, on the contrary, healed beautifully. Let them take the disease away, stick to no typical resections, but gouge and cut, and do whatever will remove disease. A joint could produce general tuberculosis, but this was rather exceptional, and he thought the generalization must depend on other and multiple foci—at least the reverse had not been proved. Professor Ollier had not mentioned the German operation. Arthrotomy was not a distinctive word. In Germany it signified wide opening of the joint, removal of the capsule and of the foci of bone till nothing remained around but healthy tissue; and then the reposition and treatment for cure by first intention, antiseptically. Such operations were often huge. They involved,

in the knee, for example, transverse division of the patella, removal of the disease, or, it might be, the front and flaps, and an operation as if for extirpation of a tumor. Professor Ollier said the operations were dangerous, but he (Volkmann) had not found them so. Professor Ollier also said that the foci could be easily left, and he (Volkmann) agreed, but thought that, in regard to the knee-joint, synovial disease was the most common.

Professor Trélat agreed that most of the affections of joints, spina ventosa, etc., were really tubercular, and he was agreed with Volkmann that the tubercular condition could heal spontaneously. He was not so clear about the diathesis. Its influence varied. It might, indeed, have no influence upon the wound, but it might certainly determine the development of other local foci.

Professor Volkmann added that out of two hundred and fifty cases of excision of the hip he had seen only five or six where the disease was not tubercular.

Professor Ollier, in his reply, said he thought the tuberculosis of children differed from that of adults. He opened largely, so as to see and remove all disease, divided the ligaments, and cut out foci. He highly esteemed the importance of the total removal of the disease, yet doubted the powers they had to remove it. He did not aim at immediate union.

Dr. Joseph W. Howe, of New York, showed a large vesical calculus which he had removed by the suprapubic method.

Dr. Lauenstein, of Hamburg, gave a demonstration in Mekuluz's operation for caries of the foot, giving eight cases with good results, four of which had been completely cured; one only required amputation afterward and one died.

Dr. Sklifossovsky, of Moscow, reported certain Russian cases.

Mr. MacEwen, of Glasgow, read a paper on

OSTEOTOMY FOR GENU VALGUM,

in which he related his experience with the supra-condyloid method.

In the discussion which followed, Professor Ogston, of Aberdeen, said he had previously operated by a method which had been called by his name, and it was, he thought, now time that some conclusions should be arrived at concerning the various existing methods of operating for genu valgum. There had now been sufficient time given and sufficient experience of these operations to enable surgeons to arrive at some definite understanding regarding them. He had himself operated by MacEwen's method a considerable number of times, and in such a way as to be enabled to form a definite opinion on comparison of these two methods. He had operated on one side of the body by his own method, and on the other side by MacEwen's operation exactly as described by its author; and he was forced to come to the conclusion that, for simplicity and good results, MacEwen's operation was better than those he had himself advocated. He had not for himself altogether given up his own operation, chiefly because when one got into the habit of doing a particular operation, one did not like to throw it overboard altogether, being so familiar with it. But he had for some years past told his students that MacEwen's operation was the best, and he wished to make to that meeting of the congress a similar announcement. He would advise every person who wished to osteotomize for genu valgum to adopt it in preference to his own. Referring, however, to the statistics which Professor MacEwen had laid before the congress, he said that he had found the German surgeons, even those who at first had adopted his own operation enthusiastically, had now given it up in favor of MacEwen's, as the better and simpler operation of the two. That was another reason for adopting it himself.

Professor Chiene, of Edinburgh, said that after what he had heard, he thought it right to state that, although he could not go to the length of Professor Ogston in throwing up his own operation entirely, still he would give MacEwen's operation a fair trial on his return to Edinburgh. He thought that in all likelihood he would be able to report as favorably as Professor Ogston had done concerning it. It was, however, after all, the profession that were the judges of the merits and demerits of these operations, and they had seen from the statistics which had been given in that section, and he also knew it to be the fact, that his own operation, whatever he might think of it himself, had not commended itself to the profession generally.

Professor Schede, of Hamburg, said he had put forward an operation for genu valgum of the tibia which had gone by his name, and he still practised it in some cases. But in practising that operation he had not done so by old ways, especially so often as he had previously done, but had substituted for his own the operation of MacEwen, and had by that method obtained excellent results. He thought in many instances that the tibia was involved, and he therefore in these cases performed his own operation. But there was no doubt that there was a large number of pathological points showing that the femur alone was involved in a great many cases, and in some equally so with the tibia. He differed from MacEwen in this respect that, in doing his operation, he did not use several chisels, as was recommended in MacEwen's work on osteotomy, but only one, thinking the withdrawal of the instrument from the wound was a serious matter, inasmuch as it sometimes led to a disturbance of the parts, and to a difficulty of reintroduction of the instrument. But, along with all German surgeons, he accepted MacEwen's operations.

Mr. Bryant, of London, said he thought the section, after hearing what had been said by these three great men, would scarcely find it necessary to discuss further the relative value of these operations. They would all agree that MacEwen's operation had been proven by the statistics adduced, and also by the fact that the authors of the other methods had now practically given them up. He must say for himself that he had used MacEwen's operation many times with very great success, and it was gaining ground where previously Ogston's operation had been practised. He was sure the section would endorse what had been said about MacEwen's operation being the best one, but he could not sit down without expressing the very great pleasure he felt at the manner in which the other gentlemen had given up what he might call their pet operations. Professor Ogston had done this with the greatest possible grace, and he (Mr. Bryant) was sure the section would award him and the others a vote of thanks for the manner in which they had acted.

Dr. V. Robin, of Lyons, next read a paper "On a New and Perfected Method of Osteoclasis for Genu Valgum," with eighty photographs of patients operated on after this new system.

Mr. W. Adams, of London, read a paper demonstrating a series of photographs taken from cases of

DUPUYTREN'S FINGER CONTRACTION.

He took occasion to correct what he said was in the books, the anatomically imperfect description of the fascia and its relation to the tendons of the hands, with a special view to the pathology of this affection. His own operation for the cure of the condition, which he described at length, he designated as a happy combination of the tenotomy of Dupuytren first described in 1831 with the subcutaneous surgery of Stromeyer; its object being to deal with the fascia at fault, as well as the tendons. As to the pathology of the condition he still adhered to his own view that it essentially depended on a chronic gouty thickening of the fascia.

In answer to a question as to the return of the condition after operation, he said that in his own cases he had found no severe ones of return and had never seen much

tendency to it. The great majority remained free from it for life.

THE LISTERIAN ANTISEPTIC TREATMENT.

In the absence of Professor Sir J. Lister, of London, who was to have opened the discussion of the present form of his treatment, PROFESSOR ESMARCH introduced the subject with a paper. He began by expressing regret at the absence of Lister, the illustrious master and teacher of them all. He then went on to describe the method of treatment now followed in his own clinique. The aim was the avoidance of suppuration in any case, and the leaving of the wound undisturbed. This was best done by a permanent dressing preventing the entrance of germs. The postulates were, first, exact hæmostasis; second, the avoidance of cavities in the interior of the wounds; third, drainage, artificial ischæmia, application of multitudes of catgut ligatures on great and small vessels, and bandage applied before removal of tourniquet, support of all the deep parts by sutures, curling in the edges of the skin, and pressure. The drainage-tube, as preventing healing, was not now used by him, but openings were left for escape of exudation.

Asepsis was minutely studied. The bandage strips were sterilized by dry heat and sublimate. The spray was used only *before* operation, so as to disinfect the air in the room. During one operation distilled water with salt only of specific gravity of the blood, was used for irrigation, but at the end sublimate was employed.

Occasionally other antiseptics, as iodoform, were used. For bandage material, loose, absorbent, soft matter was needed. Peat was useful in pillows (no Mackintosh), dipped in carbolic lotion. Then immobilization of the parts was obtained by glass splints till healing by first intention occured. The latter took from eight to ten or fourteen days to five or six weeks after operations.

DR. MOSTIG-MOORHOF advocated iodoform treatment of wounds, and said he operated with no other antiseptic. He used cold water during operations. There was no irritation and certain asepsis. Iodoform prevented transudation of the white blood-cells. He narrated a case of traumatic septic gangrene extending above the knee, where yet the knee-joint was found aseptic at the post-mortem examination. Iodoform, also, was a substance that diminished pain.

DR. SCHEDE said that the principles of antiseptics remained unaltered, though the methods had changed. After his training in Halle, when called to Berlin, he found Lister's method perfect in its results. But on succeeding to Marten, at Hamburg, he had never had perfect success with Listerism; he was now unable quite to exclude accidental wound disease from his cases. The hospital was old, and in many respects undesirably arranged and situated. He tried iodoform without good results. On the reports as to the substance he had resolved to try the sublimate dressing, and now, after experience, had got with it brilliant results. Erysipelas at once disappeared, not one case had since occurred under the dressing in his clinique. There was neither septicæmia, pyæmia, nor irritation. Wounds had occurred; but they were dry, and showed a great tendency to heal by first intention. His impression was that it was equalled by no other plan. He now used a solution of 1 to 500, and had no case of poisoning with these strengths. Sometimes, however, there was tenesmus of the rectum. Children especially tolerated the sublimate wonderfully. In the final dressing he tried to keep everything dry.

DR. MIKULICZ did not agree with either Moorhof or Schede. In his clinique, which was much worse than Schede's, he had had no erysipelas with iodoform. But iodoform could not be used alone. Other soluble substances must be applied where its insolubility prevents its fulfilling the indications. He disinfected with carbolic or sublimate solution, and had no spray. In the vagina, etc., he plugged the canal with iodoform gauze; in rectum, stitched one side and the upper end of the sphincter, and had no drain, even where the peritoneum was opened. Poisoning occurred only from excessive use.

PROFESSOR NEUDÖRFER, of Vienna, said the aim of antiseptic surgeons was the same, but the methods varied, and must of necessity vary, almost to infinity. Our knowledge was limited; they knew that decompositions occurred, but nothing as to how, how far, or how intensely they did so. Each surgeon was satisfied with his own plans and really got good results. But statistics were not of much value. They must study rather in the direction of sepsis. Sepsis needed water; therefore he never used water in his wound treatment. He used no sponges, but a dry towel crumpled together to wipe up the blood and wring it out. The serum of the blood was a matter that should be studied; oxidation and deoxidation were important processes. Therefore he used in his wounds peroxide of hydrogen and had found singularly good results.

PROFESSOR BUCHANAN, of Glasgow, said the discussion of antiseptics without Lister was like the play of Hamlet with the Prince of Denmark left out. As a representative of Scotland, the home of antiseptic surgery, a colleague of Lister, and one who had witnessed his earliest results, he wished to contribute a few words to the discussion. He agreed that the principles of antiseptics were always the same, though the methods might vary; and he described the method now employed in Glasgow.

DR. SCHELKLEY, of America, said the tendency to disease, sepsis, etc., was different in different races. His practice had been in the tropics. First he used thorough Listerism, but never got healing by first intention, but always slight surface sloughing and healing by second intention; yet no pus and no fever. He then changed his plan, ceased to spray, and irrigated during the operation with salicylic acid or sublimate, and iodoform dressings or boric lint. Salicylic and iodoform gave the best results, yet he did not get "first intention."

PROFESSOR KOEBERLÉ, of Strassburg, said that since 1884 he had used only linen to wipe his wounds, and had had no case of erysipelas among his operations since then. He claimed to have better results than Schede; even his ovariotomies were all cured.

PROFESSOR PLUM said that the Danish surgeons agreed entirely with the German, but he was prevented from agreeing with Esmarch's plan on account of its cost. The chief antiseptics were soap and brush, and by simple means much might be done.

PROFESSOR TRÉLAT said he had, three years ago, laid down the following lines: Make the wound of a form suitable for healing by first intention, and perfectly adapted. Leave no foreign body in the wound, either mechanical or septic. Antiseptics did not exist in some countries—not on the top of Chimborazo—and half-educated Americans did wondrous operations on negroes. The principles of antiseptics were not altered; the practice was being perfected. He pointed out the incomparable merit of Lister, who had given them the principles; whatever the methods might become was of little importance. He (Trélat) used the iodoform gauze—deeply as plugs, and superficially as required; and made a large cushion pressed with elastic bandages to the wound, changing the dressings on the fifteenth day.

DR. MOSTIG-MOORHOF challenged Mikulicz to say that he had ever tried a thorough iodoform dressing; and if not, whence he knew that iodoform required other antiseptics to supplement its use. At the time that Schede had tried iodoform there was an epidemic of erysipelas all over Europe, and if he would try it now he would get better results.

PROFESSOR PLUM closed the debate with a compliment to Lister, which was received with great applause.

PHELPS' OPERATION FOR CLUB-FOOT.

DR. A. M. PHELPS, of Chateaugay, N. Y., detailed cases and showed photographs of club-foot which he had treated by a new operation, consisting of tenotomy

of the tendo Achillis, incision of the sole of the foot opposite Chopart's joint, cutting of the tendons and tissues down to the bone, leaving only the external plantar artery and nerve. Afterward the foot was fixed in position by wire hooks of adhesive plaster laced together. It had been performed in children five years of age or thereabouts.

Professor Studegard, of Copenhagen, read a paper on

THE TREATMENT OF STRICTURES OF THE ŒSOPHAGUS.

He had, he said, taken great interest in this question and in the statistics of it. Where dilatation failed, gastrotomy, he thought, might be had recourse to, and the stricture dilated even from that. In his practice in cavernous stricture one case had survived for seven, one for six, and one for five months after the operation. In four of stricture from cicatrix, two died and two survived. In pressing cases, where the gastrotomy could not be performed in two stages on account of nutrition of the patient, he thought that a minute opening should be made at once, and close sutures should be adopted. Langenbach made a capillary puncture for this purpose. He recommended, as a general rule, that the operation should be done in one sitting, the sutures not including mucous membrane. The latter was so loose that there was no fear of including it. He referred to a patient upon whom he had operated for stricture of the œsophagus, probably superficial, two and a half years ago, who now fed himself by a drainage-tube doubly bevelled at the point, and was in a perfect state of health.

Professor Hjorth, of Christiania, adduced a case of stricture from contraction after swallowing an alkali. No sound could be passed below the cricoid cartilage, and there was difficult swallowing by slow efforts. Gastrotomy was performed, with œsophageal catheterism and electrolysis applied at the part and a specially constructed bougie. The positive pole was on the right side of the neck; first five, then ten, and finally fifteen cells were applied, and after an hour the bougie went through suddenly. Stricture three ctm. long. No bad results followed, and a repetition of procedure was gone through twelve days later. The patient could now swallow, and soon flesh and solids were swallowed, and a No. 19 bougie (Charrière) went through from below and above. The largest bougies now passed, and the patient was well nourished. A fortnight later he (Professor Hjorth) closed the gastric fistula by a vivification operation and a bridge transplanted by glissement. For such catheterism the cardiac opening must be large enough to admit the finger. The cardiac orifice was found without much difficulty, especially if a curved staff bougie was first passed up. To cure the gastric juice digestion of the wound after the first operation, he found the bismuth dressing valuable. He therefore advised gastrotomy and treatment from below for œsophageal cicatricial stricture, and secondly the use of electrolysis.

Professor Verneuil once saw a stricture from alcohol. There was no malignancy and no caustics in the case, alcohol being the sole cause of the condition. He approved of the conclusion of the operation in one sitting. He sutured closely and opened very minutely, about the size of a No. 10 English catheter, and nothing escaped. The sound was lodged and stitched in, and no harm ever resulted, the antiseptic dressing being applied. So long as the patients could swallow, and a fine sound be passed, dilatation was the proper treatment, especially by the permanent lodgment of a red rubber sound; and the patients could be brought to go about all their affairs with this sound in, it being withdrawn when they wished to swallow.

Professor Schönborn warned the section against gastrotomy when the patient had bronchial symptoms, as these probably indicated the involvement of a bronchus. He approved of the operation being done in two sittings. The piece of stomach fixed in the wound had, however, in some of his cases, become spontaneously perforated from deficient nutrition.

M. Petit, of Paris, gave some very elaborate statistical details as to 155 operations, with two per cent. cures and twenty-seven per cent. deaths. This was before antiseptics were employed.

Mr. Thornton, of London, spoke of one case from hair swallowing. He proceeded to make a median incision, opening the stomach by transfixion, the peritoneum being protected by packed carbolized sponges. Removal of the mass was affected, and the stomach sutures were made in a double row, deep and superficial. There was subsequently right parotitis and incision, but no pus. Left parotitis was treated by belladonna cataplasms. He found a sponge had been left in the peritoneum, chiefly by localized pain and counting the sponges. On opening the abdomen to remove the sponge he found the stomach wound healed.

Mr. Bryant, of London, said he found one row of sutures enough. He described the minute opening of the stomach adopted by him. His colleagues in Guy's Hospital had, in six operations, used clamping, drawing out the stomach by two rubber-shield forceps, and used no sutures. One patient subsequently married and had a child. In her case, two and a half years after the operation, she suddenly found she could swallow liquids and solids, such as bread, fish, and minced meat. She still had the fistula, and Mr. Bryant had advised her to leave it alone, as she was quite dry, even after a large meal.

Professor Sklifforoswsky advised œsophagotomy, and subsequent dilatation through the wound.

Professor Hjort said fifteen elements were necessary in electrolysis.

M. Ollier advised, in preference to operations, wherever possible, the use of the minutest whalebone bougies, one-half mm. in diameter, and the treatment on the principle which Syme, of Edinburgh, had enunciated for the urethra, viz., that no case was impermeable. He admitted this was sometimes excessively difficult, but it was always possible, and then dilatation was often extremely easy.

SURGICAL ANÆSTHESIA.

Dr. O. Wanscher, of Copenhagen, in a paper on this subject, dealt with anæsthesia by rectal insufflation of ether vapor. Pirigoff's first attempts were not attended with good results. Duping and others tried the method, but it fell into disuse. Two years ago he (Dr. Wanscher) again took up the subject, and his experience had convinced him that it should be revived, especially in aid of other methods, so as to improve the respiratory organs. There must be preliminary cleansing of the rectum, and insufflation of the vapor through a warmed reservoir. He narrated cases.

Dr. Jennings, of London, said that unless the epiglottis were drawn forward by a suture put through it, it fell down during respiration, and unless this were done tracheotomy should not be performed. In experiments on dogs with chloroform, the epiglottis was secured forward, the tongue drawn forward, and the chloroform administered until the heart stopped, and more was then given until artificial respiration failed to restore its action. Then the jugular vein was opened, a canula put in toward the heart side, and a saline fluid injected, while bleeding from the peripheral end was allowed to go on. The dog recovered, but, from the amount of blood lost, was likely to die. He then injected the quantity of blood corresponding to the excess of blood lost, and the animal recovered.

MASSAGE.

Dr. Tubelerdowsky, of Berlin, in a paper on this subject, said he knew a lady in Berlin who took a pain in her knee every time her husband had an attack of angina pectoris.

Dr. David Prince, of Jacksonville, Ill., read a paper

upon "Palatoplasty with a New Instrument," and demonstrated his needles.

Professor Moore, of Rochester, N. Y., read a communication on

LUXATION OF THE ULNA IN CONNECTION WITH COLLES' FRACTURE.

In this fracture, he said, there was also an accompanying displacement of the lower end of the radius. After the radius gave way the attachments of the triangular cartilage and internal lateral ligament, acting on the styloid process, broke it off, or were themselves torn. In continuation of the force the ulna was shot on, and, penetrating the fascia and skin, might become compound. He advised reposition under chloroform, with subcutaneous division, if needful, in recent cases. In old standing cases he resected the lower end of the ulna. His method of reduction was by flexion and pronation over the knee, and he retained it with finger and thumb. He then laid a slender splint and rolled bandage, three-fourths of an inch in diameter, and fixed it by a strip of plaster drawn up as tightly as possible. The hand was allowed to drop, and a sling of bandage the length of the plaster strap put over the spot.

Dr. Oscar Wanscher, of Copenhagen, read a paper on the

TORSION OF LARGE ARTERIES NEAR THEIR BIFURCATION.

He had, he said, had no cases of his own, but he had experimented on animals on torsion and refoulement, and he demonstrated the results.

Professor Plum, assuming the chair, thanked the audience, the presidents, the speakers, and the bureau, and bade all *au revoir à Washington en* 1887.

(To be continued.)

Correspondence.

SHALL ARMY SURGEONS PRACTISE OUTSIDE THEIR POSTS?

To the Editor of The Medical Record.

Sir: The accusation of unfairness from one who hides himself behind the wand of the god of dissimulation, etc., falls flat; and the letter he writes to prove it fails lamentably. The mental obtuseness which prevented my seeing things as some medical officers see them, still prevents me from acknowledging the fairness of this accusation. The "extract from a letter" simply begs the question.

I shall be more than glad, if it can be shown that any statement in my letter is not strictly just and fair. The "extract" simply proves that the custom of which I complain dates farther back than I had supposed, from what had been told me by "officers and gentlemen" in the army. That does not make the custom any more proper, nor does it prove any statement of mine unfair. I see nothing in this "extract" to convince any one that it is fair and honorable for an adequately salaried army surgeon to employ most of his time in practising outside his post, when by so doing he is necessarily brought into competition with physicians who have not the advantage of an assured and regular income outside of their practice. I must reiterate, that it is unfair and unjust competition; and no amount of "extract" is going to alter that FACT.

The argument that it would be ungracious to deprive a suffering public from consulting army surgeons looks pretty, but is unmitigated bosh. If that will apply to any one branch of the service, it must apply logically to all others. Imagine a suffering public seeking legal advice from the law officers of the Government in ordinary legal matters. Imagine also the frame of mind of civil attorneys-at-law *et al.* under such circumstances.

With all due respect I would submit that the average army surgeon who does outside practice, is actuated more by a strong desire for the accruing fees than by any purpose of "becoming familiar with disease under all circumstances," etc., however beautiful and lofty such a purpose might be. I am of the opinion, rather, that the purpose kept steadily in view is mainly in regard to that "which relates exclusively to (the army surgeon's) private interests."

Notwithstanding the "extract from a letter" with its specious argument, I am still of the belief that it is not, and has not been, the general custom for army surgeons to do or seek outside practice except under exceptional circumstances, which do not obtain here. If at small posts "it has been found much more satisfactory, for military reasons, to have the duties of post surgeons performed by a regular medical officer," it would be equally satisfactory, for civil reasons, that he should confine himself to his appointed duties, and not encroach on what I claim is no legitimate field for operation. Stripped of all sentiment, the army surgeon is a public servant and is paid for his services. If he has plenty of time to devote to outside practice, then he is paid too much for what little service he does render, and therefore receives more than he is justly entitled to; or if it is proper to practise in the region about him, *to the end that he may not grow rusty and thereby inflict injury on the service generally*, then it is not proper for him to receive fees for so doing, since by his own admission he is only striving to maintain his standard of excellence.

The attempt in this "extract" to throw upon us physicians the odium of trying to prevent army surgeons from familiarizing themselves with the "maladies prevailing through the country and among citizens generally," will fail simply because it does not contain the elements of common-sense.

It will require more proof than is adduced by "Caduceus" to convince any one that practising outside of posts by army surgeons *for pay* is proper, while they are on full salary from the Government.

Very truly yours,

John G. Stanton, M.D.

New London, August 20, 1884.

OBESITY AND THE SEXUAL FUNCTION.

To the Editor of The Medical Record.

Sir: In your issue of this date, at the bottom of the first column of page 183, I notice an explanation of the fact that women are more subject to obesity than men which strikes me as very odd. It is contained in these words: "The lesser activity of their sexual life." I feel that I am not alone in failing to understand the meaning of this phrase. You surely do not mean that men copulate more frequently than women; and yet what else can you mean? Yours respectfully,

Youthful.

August 16, 1884.

[We refer to the generally accepted fact that women, as a rule, experience sexual feelings less intensely and less frequently than men, and to the fact that the mass of respectable women masturbate less and have intercourse less often than men.—Ed.]

The Rights of a Defendant on Trial for Rape.—A court in a Western State has recently held that, upon the trial of a person indicted for rape upon a female child, evidence is admissible of the answers given by the girl, two or three days after the alleged injury, to the questions of her mother, induced by the girl's singular demeanor. A hypothetical question put to a physician, whether in his opinion the facts assumed would constitute rape, is altogether improper, being a demand for his legal instead of his medical knowledge. Yet, if he gives a correct answer, the impropriety of the question is no ground for a new trial.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August 23 to August 30, 1884.

HEAD, JOHN F., Colonel and Surgeon. Granted leave of absence for four months. S. O. 201, A. G. O., August 27, 1884.

WOODHULL, A. A., Major and Surgeon. Detailed as member of Medical Examining Board at U. S. Military Academy, West Point, N. Y., vice Captain R. H. White, relieved. Upon adjournment of the Board to return to his proper station. S. O. 201, C. S., A. G. O.

LIPPINCOTT, HENRY. Promoted Major and Surgeon, to rank from August 17, 1884, vice Woodward, deceased.

BARTHOLF, J. H., Captain and Assistant Surgeon. Relieved from duty in Department of the Columbia, and to report in person to Commanding General, Department of Texas, for assignment to duty. S. O. 199, A. G. O., August 25, 1884.

FINLEY, J. A., Captain and Assistant Surgeon. The leave of absence granted him in S. O. 91, C. S., Department of Texas, extended two months. S. O. 198, A. G. O., August 23, 1884.

TAYLOR, M. E., Captain and Assistant Surgeon. Granted leave of absence for four months, to take effect on arrival of a Medical Officer at David's Island, N. Y., to replace him. S. O. 200, A. G. O., August 26, 1884.

GIBSON, R. J., First Lieutenant and Assistant Surgeon. Relieved from duty in Department of the Missouri and ordered to Department of California for duty. S. O. 202, A. G. O., August 28, 1884.

DIETZ, WILLIAM D., First Lieutenant and Assistant Surgeon. Relieved from duty at the Military Academy, West Point, N. Y., and ordered to the Department of the Missouri for duty. S. O. 202, A. G. O., August 28, 1884.

MCCAW, WALTER D. Appointed Assistant Surgeon, with rank of First Lieutenant, to date from August 20, 1884.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending August 30, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
August 23, 1884	0	26	32	1	50	22	0	0
August 30, 1884	0	34	28	5	38	30	0	1
Deaths.								
August 23, 1884	1	16	5	1	10	11	0	1
August 30, 1884	0	11	5	4	12	17	0	1

STIGMATA MAIDIS IN GONORRHŒA.—Dr. Bennett says that he has had unusual success in the treatment of gonorrhœa by fluid extract of corn silk (stigmata maidis). To him the treatment was quite novel, while it has been a great comfort to the patients, who were entirely relieved within a week, and very often in three days. He depended alone upon the corn silk, and of course made no error in attributing success to that drug. A half-teaspoonful to a teaspoonful of the fluid extract three times a day will prove effectual in male or female.—*Therapeutic Gazette.*

"DEATH owing to visitation of Providence under suspicious circumstances," is a coroner's verdict in Munster.

A CURIOUS FREAK OF NATURE.—Dr. Marvin, Resident Physician of the Saginaw Hospital, East Saginaw, Mich., sends us the account of a very curious occurrence. "A few days ago," he writes, "while Dr. Ross, Surgeon-in-Chief of Saginaw Hospital, was attending a case of obstetrics, he met with a peculiar freak of nature. After the child was delivered and the umbilical cord severed, he found a shred of membrane passing into the child's mouth and seemingly fast there; on following it to the vulva on the mother he found it was attached internally. He severed the shred, and by further examination found that it passed into the child's mouth behind the soft palate and out through the left nostril, and was tied in a slip-knot around the part that entered the mouth. After the secundines were removed the other end was followed to its attachment, which was on the placenta near the umbilical cord. It was there found it started in a shred about three fingers in width, and diminished until it was about one-fourth of an inch wide where it entered the mouth; from that point it kept up a uniform width to its end." Dr. Marvin encloses to us the specimen, so that we can verify his description.

THE QUESTION OF THE FLORIDA CLIMATE.—Dr. R. A. Lancaster, of Gainesville, Fla., writes us a letter in defence of the Gainesville and the Florida climate, supplementing Dr. Bradner's letter. After some rather personal criticism of Dr. Boyland's views, he concludes: "That many consumptives do die in Florida, however, all will admit, and I think their physicians are to be censured for sending them away from the comforts of home when they are so evidently beyond all hope of recovery; but that the lives of many consumptives have been prolonged, and many catarrhs and cases of bronchitis of long standing have been permanently cured, is a fact that no honest observer will deny. This 'Question of the Florida Climate' is one of paramount interest, not only to the profession, but to countless invalids throughout the United States. Now, how can the truth be known when there are so many conflicting statements regarding it? Would it not be a capital idea for the American Medical Association to appoint a commission of unprejudiced and uninterested men, to come and spend some months in Florida and make an official report of what facts could be gathered, both as to Florida in general and as to particular localities? No doubt physicians of note could be found who, on account of catarrhs, bronchitis, etc., would be glad to spend a few months in our genial clime. Will not Dr. John T. Metcalf, of New York, favor the readers of THE MEDICAL RECORD with his views of Florida as a health resort? I am told that he spent several months in and around Gainesville some years ago."

THE REMOVAL OF BODIES FROM ONE BURYING-GROUND TO ANOTHER.—The question of the right to remove the body of a person from one resting-place to another is frequently up before the courts for determination; but an unusually curious instance occurred recently in Brooklyn. A gentleman named Gardiner H. Wolcott, residing in Astoria, died in 1881, and was buried in Greenwood Cemetery. He was supposed to be intestate, and his property, amounting to about forty thousand dollars, was divided up between his heirs. Not long since a will was discovered directing that his body should be buried in Greendale Cemetery, Meadville, Pa. An application was then made to the Surrogate for a sufficient allowance to carry out this wish, which was opposed by the relatives of the deceased man, who would be obliged to contribute their respective shares to meet the expense. The decision of the Surrogate was to the effect that, as the estate was divided up, and the relatives opposed the reinterment, the body must remain where it was.

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Original Articles.

SUCCESSFUL ŒSOPHAGOTOMY FOR THE REMOVAL OF FOREIGN BODIES.

BY LEROY McLEAN, M.D.,

SURGEON TO TROY HOSPITAL, TROY, N. Y.

IN the number of this journal for April 29, 1876, I recorded two cases of œsophagotomy. To those I have now to add three others, making in all five œsophagotomies done for the removal of foreign bodies. A summary of the two cases referred to will, I think, be of interest in connection with those I am about to report.

CASE I. *Tooth-plate swallowed during sleep; œsophagotomy; recovery.*—Mr. C——, of West Troy, N. Y., during sleep swallowed a gold tooth-plate with one central incisor attached. The plate, which was crescent-shaped, measured from point to point one and a half inch, and one-half inch from outer to inner edge. On the outer edge were eight sharp and irregular projections which fitted between the teeth and held the plate in position (see Fig. 1).

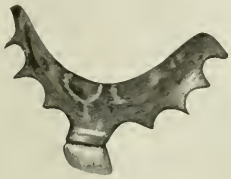

FIG. 1.[1]

I saw him three days after the accident, after many attempts to dislodge had been made, and after the conclusion was reached that the foreign body had been pushed into the stomach. He was suffering intense pain; neck swollen and inflamed; all nourishment regurgitated; *voice faint and husky*. The foreign body could be easily grasped with œsophageal forceps, but the application of much force to dislodge it was deemed impracticable owing to the many points of resistance which the sharp projections on it offered. The operation was performed the following day. Incision on the left side three inches long, extending from top of thyroid cartilage downward, midway between it and the sterno-cleido-mastoid. Upon reaching the œsophagus a large-sized lithotomy staff was introduced through the mouth and the œsophagus pushed forward, into which a longitudinal incision was made, the finger introduced, and the foreign body with much difficulty removed from its resting-place just below the cricoid cartilage.

The wound in œsophagus was not closed. For the first day enemata of beef-tea were given, and bits of ice allowed to dissolve in the mouth. After twenty-four hours was allowed to drink milk, one-third escaping from wound. Third day, could swallow fluids readily, very little escaping. Fourth day, ate an oyster, swallowing it without experiencing pain. Fifth day, sat up dressed; could readily swallow soft solids; no discharge of fluids by wound. Sixth day, was out of doors. Twentieth day, resumed business; wound entirely healed.[1]

CASE II. *Tooth-plate impacted in cardiac portion of œsophagus eleven months, causing stricture; œsophagotomy; recovery.*—Mr. P——, of Gansevoort, N. Y., while at dinner dislodged four upper false teeth attached to a silver plate by striking them with his fork. They were involuntarily swallowed, passing into the œsophagus. The plate was one and a half inch broad, by about one inch in depth from front to rear (see Fig. 2).

FIG. 2.

His physician was summoned, but did not arrive until evening, when an attempt was made to reach the teeth. Instruments were passed down over ten inches, but failed to give any indications of touching them, leaving the inference that they might have passed into the stomach. This was strengthened by a sharp and severe pain which he felt in the region of the stomach. Within a fortnight most of the pain and soreness had passed away, and he was enabled to swallow liquids without difficulty and most kinds of food with varying success. He frequently passed weeks without any marked inconvenience; at times, however, there would be unusual distress in the chest, or a return of the difficulty of swallowing. He first consulted me six months after the accident, when I found that the teeth were still in the œsophagus, eleven and a half inches from front of upper jaw while the head was thrown back. An operation was advised: this he wished to delay, as he was not suffering essentially. For five months nothing was done, when, as he was having great difficulty in swallowing, I was consulted. An operation was again advised, to which he assented. *This was eleven months and seven days from date of accident.* The incision was made on the left side of the neck, commencing opposite the thyroid cartilage and reaching to the sternum. The œsophagus was reached without difficulty, and an opening large enough to admit the finger made in it as near the sternum as possible. Passing a finger through the incision and downward a constriction was felt, below which lay the foreign body quite out of reach. A polypus forceps was then directed by the finger down upon the plate, which was soon brought up, without the teeth, however, they having become detached in the effort at removal. The teeth were voided by the rectum some days after. Wound not closed. He began to take liquid nourishment by mouth on the third day. On the thirteenth day walked out of doors. Owing to a troublesome cough the wound did not close until the sixth week, at which time he resumed his business. He rapidly regained his health, which at this writing is still excellent.

CASE III. *An infant swallows a penny; œsophagotomy; recovery.*—E. F——, aged sixteen months, residing in Lansingburg, N. Y., while playing with an ordinary nickel cent, put it into his mouth and swallowed it. The family physician, Dr. Capron, who was immediately summoned, after carefully examining the child concluded that the penny had passed into the stomach, and directed that the stools be watched. On the 27th he was again called and found that the child was regurgitating most of the food taken. A probang, with sponge attached at end, was passed to the stomach. This for a time seemed to afford relief. On the 28th and 29th an olive-pointed probang was passed with no effect, the food being persistently regurgitated. I was called to the case on the 30th. The patient was then refusing absolutely to take nourishment, and was beginning to suffer from want of food. The olive-pointed and sponge probang was again introduced, but as they gave no indication of contact with the foreign body, a metallic catheter guide (Otis')

[1] He is, at this date (July, 1884) enjoying good health.

was passed. A distinct click was heard as it was moved up and down within the œsophagus. The sponge probang was again tried but the penny could not be dislodged, the instrument passing beyond it at each introduction. The point of impaction seemed to be at a point on a level with the clavicle. On the 31st another effort was made with a like result. As the child was becoming rapidly reduced from inanition, an immediate operation was decided upon.

With the assistance of Dr. Schuyler, Dr. Capron, and the Drs. Bucklin, of Lansingburg, the operation was done at 11 A.M. The incision was made upon the left side. The dissection was exceedingly slow and tedious, owing to the minute anatomy of the patient. The œsophagus was finally reached without tying a vessel. A small laryngeal brush-holder, to which was attached an ivory tip, was substituted for the lithotomy staff in pushing the œsophagus forward; with this exception, the various steps of the operation did not differ from those in previous cases. The penny (see Fig. 3) was found where it had been located previous to the operation, *i.e.*, on a level with the clavicle. It was removed with a Gross polypus forceps. The wound was not closed. The recovery was rapid and complete. No impairment of voice.

Fig. 3.

Case IV. *A tooth-plate swallowed while asleep; removed by œsophagotomy twelve years after; death.*—J. F——, aged thirty-six, of Albany, in August, 1869, swallowed while asleep a tooth-plate with two central incisors attached. The plate, which was of rubber, measured one and a half inch in width, and one and one-fourth from front to rear (see Fig. 4).

Fig. 4.

Medical aid was sought at once, and efforts made at removal. It was finally concluded that the plate had passed into the stomach, as he felt greatly relieved after the introduction of the instruments. He was then removed to the city hospital, and kept under observation for some days; but as nothing resulted, and as he felt perfectly well, he left the institution and the city to make his home in Omaha. For ten years he suffered no pain, and but little inconvenience, and then only when large pieces of food were swallowed. During the next two years, however, the difficulty in deglutition greatly increased, until it was almost impossible to swallow even fluids. Believing that he could not long survive this condition, he concluded to seek medical advice. Getting no encouragement in the West from physicians whom he consulted, he came to Troy seeking the counsel of his relatives.

I saw him then for the first time. *This was twelve years and two months from time of accident.* He was greatly emaciated. Most of the liquid nourishment (the only form in which it could be swallowed) taken was immediately regurgitated. His face bore an anxious expression; was very solicitous as to the immediate future, and begged that something might be done for his relief.

Upon passing an olive-pointed probang, an impassable obstruction was found eleven inches from incisor teeth. As the instrument gave no evidence of contact by sound, it was inferred that the foreign body had become encysted, and all efforts at removal in that direction were abandoned. The operation was done at the Troy Hospital, November 2, 1881, with the assistance of Drs. Schuyler and Nichols, and other members of the hospital staff. Owing to his extreme emaciation the œsophagus was easily and quickly reached, and opened at the lowest possible point. By introducing the finger it was possible to reach the obstruction. It was then found that, with the exception of a tip of one of the wings, the plate was completely encysted. By the aid of the finger and an œsophageal forceps, the plate, after prolonged effort, was lifted from its resting-place. A single suture was introduced at upper end of external wound, otherwise it was left open as in previous cases. A nutritive enema with brandy was administered and the patient put to bed. Then for the first time a peculiar wheezy and labored respiration, and slight emphysema in the wound, were noticed. He did not rally well; though he was enabled to swallow considerable milk and brandy (by holding the edges of the wound together) and retain the enemata, he gradually sank. The emphysema increased, the respiration became more embarrassed, and the exhaustion more pronounced, until the time of his death, which occurred forty-eight hours after operation.

The autopsy was made twelve hours after death. The wound was found to be healthy. There was no evidence of inflammation of parts at the point of impaction of the plate. Search was made for the cause of the emphysema which appeared immediately after the operation. It was thought that during the removal of the plate from its surroundings a slight perforation of the trachea had occurred, but the most careful search revealed nothing, however, to confirm this belief.

The conclusion finally reached was, that during a violent fit of coughing at the time of the administration of the anæsthetic the expiratory effort ruptured some of the air-vesicles, the air first escaping into the cellular tissue between the lobules of the lung, then into the mediastinum, and from thence to the root of the neck. The presence of dyspnœa after the operation would seem to strengthen this belief. He undoubtedly died of exhaustion.

Case V. *Tooth-plate swallowed while asleep; œsophagotomy; recovery.*—Mr. K——, aged thirty-eight, residing in East Greenbush, N. Y., on April 9, 1884, retired at 12.30 A.M. About 3 A.M. he was suddenly awakened by a sharp burning pain in his throat. Springing from his bed he hastily swallowed a glass of water and felt relieved. Retiring again, the pain soon returned with increased violence.

He then for the first time discovered that his tooth-plate was missing. After a fruitless search in the bed and upon the floor he concluded he had swallowed it, and immediately sent for a physician, who, after introducing an œsophageal probang, assured Mr. K—— that he had pushed the foreign body into the stomach. The plate, which was of rubber, had four incisor teeth attached, and measured one and a half inch from front to rear, and one and a fourth inch in width.

Fig. 5.

I was consulted on the third day. He complained of intense pain in the region of the stomach, which was increased at each act of swallowing. The expression of countenance was anxious, his general appearance that of a person after a severe illness.

Passing an olive-pointed probang, an obstruction was found at cardiac end of œsophagus, *thirteen and a half inches from incisor teeth.* Bringing the instrument in contact with the foreign body, a metallic click could be distinctly heard.

The exertion of ordinary force failed to remove the obstruction. Appreciating the liability of injury to the parts, prolonged and greater effort was deemed unwise, and an operation—œsophagotomy—was suggested to the patient. To this he demurred, preferring to wait for at least a few days. Advising him of the danger of delay, I left him. On the fifth day he entered the Troy Hospital. Since last seen says he has suffered intensely; is able to swallow but small quantities of liquid nourishment, which act is attended with increased pain.

Efforts to dislodge were again made without success. He was now ready and anxious for an operation, and the following day was therefore appointed. The operation was done at 11 A.M., with the assistance of Dr. Nichols and members of the hospital staff.

Reaching the œsophagus in the usual manner, from the left side, it was opened vertically upon a lithotomy staff. The foreign body was found to be quite out of reach of the finger. It could be readily felt, however, by introducing a long forceps, but in this manner it could not be grasped securely enough to admit of extraction.

Unsuccessful attempts were then made to pass beyond and over the plate loops of silk. Finally, a sponge attached to the probang was carefully passed beyond the obstruction, and upon removing it the sponge became engaged, and the foreign body was brought to the opening and removed by the fingers of the operator. The wound was not closed.

It should be stated, that in carrying the dissection as near the sternum as possible, the anterior jugular vein was divided. It was soon secured, with but little loss of blood, and without apparent entrance of air. The patient was put to bed, and a nutritious and stimulating enema administered soon after. He rallied well. For the first few hours was allowed to dissolve bits of ice in the mouth. Nine hours after the operation he drank, by holding the edges of the wound together, a goblet of milk. The temperature then—the highest point reached during convalescence—was 100⅘°. The recovery from this time was very rapid. On the ninth day he sat up and ate six oysters, a slice of bread, and one egg. The wound closed on the eleventh day. Three weeks from the day of operation, he left the hospital, cured. The following week he resumed his usual avocation—that of a farmer.

In reviewing the various steps of an operation to reach the œsophagus by external incision, Professor Cheever[1] so well expresses what I want to say that I cannot do better than quote him *verbatim*. A more definite or concise statement has not, to my knowledge, been published. He says: "It appears, first of all, that this incision cannot well exceed three to three and a half inches in length. This is about the distance, in average necks, from the top of the thyroid cartilage to the sternum. If we cut above the thyroid cartilage we endanger the hypoglossal nerve and lingual artery, in a deep dissection; and, more important, the *superior laryngeal nerve*. The latter crosses the space between the hyoid bone and top of the thyroid cartilage to enter the larynx, and its section would destroy the sensibility of one vocal cord, and one-half of the glottis. Through a comparatively short incision, therefore, we are obliged to make a very deep dissection down to the prevertebral muscles, and to draw various important structures out of harm's way as we proceed. First, the carotid sheath, containing the artery, vein, and pneumogastric nerve, which approximate closer and closer toward the œsophagus, as we descend the neck. Above and below are the superior and inferior thyroid arteries; on the inside the thyroid gland; below the finger, the sympathetic nerve. And, finally, running between the œsophagus and trachea, to the back of the larynx, the inferior, or *recurrent laryngeal nerve*, the motor nerve of the larynx, whose section would paralyze one-half of the glottis; and the partial division of some filaments of which, in one case of œsophagotomy, led to a permanent alteration of the voice. This nerve, lying upon the front of the œsophagus principally, is to be avoided by opening the gullet toward its *posterior* part. The œsophagus is easier found also on the *left* side of the neck, as it naturally inclines to that side. And the rule has been laid down that œsophagotomy should be done on the left side as the place of election, unless we are sure of cutting down on the foreign body on the *right* side. The deeper dissections being carried on chiefly with the director, it is possible to reach the œsophagus not only *without injuring any nerves*, except the unimportant superficial branches of the anterior cervical plexus, but also *without tying a vessel*. There is, I believe, but little danger of wounding the *recurrent laryngeal nerve* if, before opening the gullet, a lithotomy staff, or some such curved instrument be introduced by the mouth, and its walls pushed well forward. This facilitates the operation by bringing the parts well into view."

The permanent alteration of voice in Case I. was not due to the operation, for at the time of my first visit, the fourth day, I was informed that he had been unable to *speak above a whisper* since the day after the accident. The injury was probably done while making fruitless attempts to dislodge.

There is a diversity of opinion as to the treatment of the patient after the operation.

Boyer, it is said, was the first to advise absolute diet for a week and the non-employment of elastic tubes to feed the patient through.

Syme advocated the early use of the tubes, and the weight of authority seems to lean in that direction, yet it is doubtful if many have spoken from actual experience. Cheever believes that the irritation of passing tubes, however gently, is considerable; and the risk of touching granulations, thus lessening chances of early repair, is very great. I believe this to be true, for a tube cannot be passed with any degree of accuracy when once it is within the œsophagus, making contact with the wound almost certain. Experience has taught me to believe that the use of tubes is not essential, and that there is nothing to contraindicate the administration of liquid nourishment in small quantities, by the mouth, within a few hours after operation. The danger of infiltration among the long muscles, leading to suppuration, as suggested by Cheever, is, I think, *nil*.

It has occurred to me that the frequent passage of the escaping fluid through the œsophageal wound during the process of repair, has a tendency to *evert* its edges. If this be so, and it seems reasonable, such a condition of things is to be encouraged.

[1] Two Cases of Œsophagotomy, etc. Boston. 1868.

ON THE PREPARATION AND USE OF OXYGEN AND ITS CONGENERS AS REMEDIAL AGENTS.

By SAMUEL S. WALLIAN, A.M., M.D.,

BLOOMINGDALE, N. Y.

Following the appearance of my paper on oxygen, etc., in The Medical Record of October 27 and November 10, 1883, I received from every direction a flood of professional inquiry. To a few applicants I made brief response by letter.

As the tenor of all was the same, viz., an eager anxiety for definite practical details in the matter of preparing and exhibiting the agents in question, and since I found it utterly impracticable to make satisfactory reponse by letter to even a few of the many inquirers, I will, at the urgent request of numerous correspondents, endeavor in this paper to summarize such practical details as may assist those practitioners who have not as yet given much attention to the subject.

Apparatus.—Those practitioners who live in or near large cities may find it more convenient to purchase both oxygen and nitrogen monoxide compressed in iron flasks; suitable contrivances being provided for their proper expansion, dilution, and dispensation. A constant advertiser in The Record offers to supply "pure oxygen" and suitable inhaling apparatus for medical purposes, and the dental depots supply the nitrogen monoxide compressed so as to be readily portable. If one can trust to the manufacturer for the absolute purity of his

product, this method of procuring the gases saves a world of trouble and vexation; but as I have had no personal experience with them I can neither commend nor condemn. The only feasible method for those who live at a distance from these sources of supply, and the least expensive for all, is by procuring the necessary apparatus and manufacturing at one's own office.

For storage I use a meter-holder made of sheet zinc or tinned copper. A convenient size is thirty inches in diameter by about thirty-two or thirty-four inches in height—the width of ordinary sheet zinc will do. This will admit a bell or receiver, corresponding to the gasometer of ordinary city gas works, with a capacity of upward of a hundred gallons. In a large practice, or in hospitals, much larger receptacles may be used, but it is better to have several of moderate size rather than one large one, thus enabling the physician to have various admixtures and dilutions on hand at the same time.

The tank or holder, answering to the well of gas works, is to be filled with pure water, and should have a tap with rubber cork, or a faucet, near the bottom for convenience in drawing off the water when necessary to renew it. To facilitate this operation it is well to place the tank on a frame or platform eight or ten inches high, and it should also have a false bottom of wood beneath the metal one to strengthen it. A broad metal hoop at top, bottom, and middle is necessary to keep it firm in shape. The inverted bell or gasometer should have a gas-cock soldered into the top, through which to admit the gas, with ears at opposite sides by which to suspend or balance it. For the latter purpose cords, weights, pulleys, and a light framework will suggest themselves. An approximate scale, estimated in either cubic inches or centimetres, as preferred, can be readily arranged on this framework, or on the side of the bell itself, for the purpose of measuring the volume of the gases as manufactured, commingled, or respired.

For any considerable practice, not less than three reservoirs will be found necessary, as well as convenient. In one should be kept, at all times, a supply of pure oxygen; in a second, pure nitrogen monoxide; the third may be used for any standard admixture or dilution of the two, or either of them, as desired.

As an external finish a coat or two of paint, or graining and varnishing in imitation of wood, adds to the appearance and durability of the metal reservoirs.

Both the gases used must be well washed and purified as they are evolved. I use a series of four or five wash-bottles for this purpose, connected by means of glass and rubber tubing.[1] These bottles may be procured ready fitted from manufacturers of glassware through your local druggist, or you may fit them yourself at less expense.

For this purpose procure half-gallon or gallon specie jars, with rubber corks to fit, each cork to be perforated with two holes, say three-eighths of an inch in diameter, for the insertion of the glass tubing. Common corks can be made to answer by carefully cementing them with fine plaster-of-Paris after the fittings are all in position.

Select the soft or soda glass tubing of about three-eighths of an inch calibre, and not too heavy. This can be readily broken into any desired length by first nicking it on one side with a sharp file and then bend at right angles, after heating in the flame of a gas-jet or of an ordinary spirit-lamp. Hard varieties of glass may be bent by thrusting the ends into a bed of glowing coals for a few moments, should the flame heat prove insufficient.

A copper retort with suitable connections for the preparation of oxygen can be procured from any dealer in chemical apparatus. The size selected may vary from one to four pints capacity as needed. Common glass retorts may be used in lieu of copper for generating oxygen, but the bills for fractured glass and the results of occasional explosions render them both vexatious and expensive.

For preparing nitrogen monoxide the same apparatus is complete, except that a glass or porcelain flask must be substituted for the copper retort. A half-gallon Florence flask fitted with perforated rubber cork and long bent glass tube of good calibre, to connect with the first (or empty) wash-bottle, makes a very satisfactory arrangement. Platinum or gold flasks are perfect, since they thoroughly resist the action of the chemical used, but are, of course, expensive. I prefer to use glass for various reasons, even if there is, as a result, a fractured flask and a bespattered floor or table occasionally. In glass the material can be more closely watched during the process, and the danger of applying excessive heat more surely avoided. The first or empty wash-bottle acts as a safety valve, preventing reflow of water into the flask in case of sudden withdrawal of heat or of an accident.

Chemicals.—The materials used for preparing pure oxygen by the process now under consideration are potassium chlorate ($KClO_3$) and manganese dioxide (peroxide) (MnO_2).

The latter, it is hardly necessary to state, is not chemically changed during the process, but acts merely by its presence. Both chemicals should be as pure as can be procured, thoroughly dried and finely pulverized previous to using. It is even better to evaporate the water of crystallization in case of the chlorate, and it must be very thoroughly rubbed up with the manganese in a dry mortar, the most favorable proportions being four or five of the potassium to one of manganese. The exact proportion is not essential and need not be uniform, one part of the former in eight or ten of the latter working very well. Since it is so difficult to make it fine enough by hand, and requires so much labor withal, I prefer to buy the pulverized chlorate of potassium of the brand known as "chemically pure."

For nitrogen monoxide, procure simply pure fused crystallized or granulated ammonium nitrate (NH_4NO_3). It will not matter which of the three varieties is selected, so that the salt be pure and clean.

Heat decomposes this salt into nitrogen monoxide (N_2O) and water (H_2O). If the heat be too great or too rapidly applied, fumes of nitrous or hyponitrous acid (HNO) will be driven over, to be absorbed by the water in the wash-bottles.

Chemical manipulations.—To prepare pure oxygen fill the copper retort half full of the prepared potassium and manganese mixture, connect securely with the series of wash-bottles, the last one of the latter to be connected by a long rubber tube to the gas-cock in the bell or meter. Apply heat by means of the sand-bath, a jet of house gas, a spirit-lamp with several small wicks or one large one, or by a small kerosene stove. No gas is given off until the whole mass has been heated to a rather high and uniform degree, at which point the evolution is sudden and rapid, frequently trying the wash-bottles and connections severely. The heat should be promptly diminished at this juncture, to be increased again as the material begins to be exhausted.

The reaction consists simply in the disengagement of both equivalents of oxygen from the potassium chlorate, potassium chloride (KCL) resulting. The flask is to be disconnected from the wash-bottles promptly when gas ceases to pass over.

For nitrogen monoxide fill a Florence flask (those of German glass answering best) half full of ammonium nitrate; connect securely with the dry wash-bottle by a long bent glass tube (thirty inches is not too long), and it is well to wire the cork to the neck with copper or platinum wire to prevent its being forced out at a critical moment.

Apply heat gradually at first, preferably by means of a sand-bath, or very cautiously by means of the same

[1] The following is a fair assortment of tubing for fittings: Four pieces ¼-inch glass tubing, thirty inches long; four pieces ⅜-inch glass tubing, thirty inches long; one piece ⅜-inch rubber tubing, eight feet long; one piece ½-inch rubber tubing, six feet long.

lamp used in the process for oxygen. If the sand-bath be dispensed with it will be a good precaution to suspend the flask over the flame by a wire, and keep it in gentle motion in order to apply the heat more evenly and prevent the liability to fracture.

After a few accidents each novice will learn discretion and acquire the "knack," so as to make as little havoc with fragile apparatus as is possible. With the best of management and the nicest adjustment of all the conditions accidents will sometimes happen, and some taint of foreign elements will pass over into the first two wash-bottles, which will therefore, more frequently than the others, need to be emptied and refilled. More care and watchfulness are required in the preparation of this gas, and the process is slower than that for oxygen.

Suggestions for administration and for determining when and when not indicated, together with approximate dosage and condensed reports of a few additional cases treated, will be given in another paper.

The most difficult part of my task remains, since in no other form of therapeutic effort is more careful discrimination necessary, and in none are we confronted by a greater dearth of precedent. Ordinarily the diagnosis furnishes the indication, and the age, condition, and temperament of the patient are accredited as safe guides to the proper dosage.

The agents now under consideration are potent for good or evil in a superlative sense, and cannot be so exhibited. Nor have we in our libraries half a century's accumulations of literature on the subject, to which, as in ordinary cases, we can refer for aid in case of a dilemma.

One of the first misconceptions, or misapprehensions, to be thoroughly uprooted—for it is always necessary to unlearn errors before we can comprehend facts—is the inference or impression that since these agents are principally used by inhalation they are, on this account, particularly adapted, if not practically limited, to the treatment of pulmonary complaints. Nothing could be farther from the truth, as will appear from the general tenor of arguments used and facts presented throughout this series of papers. Oxygen may be now, or may in time become our chief reliance in combating the strumous and tubercular, as well as other diatheses; but it is not and will not be because it is taken directly into the lungs, the apparent principal seat of tubercular manifestations.

Its specific action is by and through its absorption into the blood and its direct and rapid distribution to every tissue throughout the entire system. It thus becomes, as already set forth with sufficient emphasis, an important source of supply to the blood, *an element of repair and nutrition*, already prepared for direct and immediate assimilation, requiring neither gastric solution nor intestinal modification in order to become an integral part of the vital organism. Its effects, therefore, must not be compared with those which follow a dose of "medicine" in the ordinary acceptation of that term. Hence, while certain immediate or acute morbid conditions are quickly removed by its timely exhibition, it cannot be ranked as a drug to be divided into definite doses and exhibited promiscuously in all acute and chronic diseases at stated intervals, as is the case with the ordinary articles of the Pharmacopœia.

If, therefore, I were to be asked whether the oxygen treatment will "cure" this or that particular malady or disease by name, as phthisis, carcinoma, rheumatism, epilepsy, I should promptly answer, No, it will "cure" no disease whatever. If, on the other hand, a professional brother should inquire, In what diseased conditions do you consider it particularly indicated? I should as promptly respond, *In every chronic morbid condition of which it is possible to form a conception.*

This may seem an extravagant estimate, but it really is not, since the question is like asking in what conditions of the system is it proper to administer nourishment? It is merely recognizing the view now coming to the front in medical philosophy, that, in the language of Ordroneaux, "We are to treat it [disease] not as a personal devil entirely, to be exorcised by philters and mummery, but rather as *the perversion of a natural state struggling to regain its equilibrium.*"[1]

Another stereotyped error in connection with the use of oxygen as a remedy must be eradicated from the average medical mind. It is assumed, on the basis of an ancient chemical dogma, that this element is pre-eminently a *destroyer;* that it is the principal, or even sole office of the oxygen inspired to break down used tissues, to eliminate refuse material, to "burn up" waste products; and that more oxygen means simply and necessarily more extensive waste, more rapid destruction—a hotter fire! This is another of the superannuated myths of science. It is true that living is synonymous with wasting, disintegration—*burning*, if you insist on the misnomer—but to cease to waste, to interrupt disintegration, to *put out the "fire,"* even for a moment, is to cease to live; it is irrevocable death. Nor can reparation, or even primary assimilation, proceed without its twin process—destruction. Admitting all this as abundantly established by both analogy and observation, there is still every corroboratory assurance, in both chemistry and physiology, that the element under consideration is less a *de*structive than a *con*structive agent, less a detergent than an aliment, less a *burner* than a *builder*.

Again, the underlying idea in all rational therapeutic endeavors, aside from surgical conservation of structure and the temporary palliation of excessive pain, is to hasten metamorphosis, both destructive and constructive, since it is universally recognized that destructive action—elimination, depuration—is but one and a very essential part of constructive change. It is the thrusting aside of obstacles which impede or bar the progress of true repair and rebuilding.

On the part of those who have been in the habit of thinking, teaching, and acting in the old rut—for rut it certainly is—it will take some time to fully comprehend, and will require a considerable effort to frankly admit this; for the rut has long been revered as the regular way, and in it we have always had, and still have, plenty of company, and that of eminence the most unquestioned. Nor is it any novelty, or in the slightest degree an innovation, to assert this. Acknowledged authorities in physio-chemistry have all along taught it. It will be a surprise to even well-read and experienced members of the profession to refer freshly, in the face of this assertion, to standard works on physiology and see how strong and positive is the evidence to this effect—evidence which most of us have all along blundered over, ignored, or but half comprehended.

"To describe fully the physiological action of oxygen would involve a description of the processes of respiration, sanguification, nutrition, and tissue-change, for to all these, and to life itself, it is essential."[2]

"Preyer showed that a greater saturation from oxygen inhalation is, *a priori*, probable, . . . and Demarquay proved it by showing that suppurating, indolent, or unhealthy wounds on the extremities of animals became quickly florid and hyperæmic when pure oxygen was inhaled. . . . Allen and Pepys, and later Limousin, showed that by inhaling an equal quantity of atmospheric air at one time and oxygen at another double the amount of carbonic acid was expired, and this increase continued for fifteen minutes after the inhalations had finished."

"Other observers have reported that the elimination of uric acid during a course of oxygen inhalation is markedly lessened, *i.e.*, that more complete combustion occurs within the system (Schmidt's Jahrb., t. i., s. 28, 1865)."[3]

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[1] Journal of Insanity, vol. xxiv., p. 333.

[2] Phillips: Mater. Med. and Therapeutics, vol. i., p. 2, ed. Wood's Library, 1882.

[3] Phillips, op. cit., p. 5.

Kollman found that the quantity of uric acid in an equal amount of urine was reduced nearly fifty per cent. by free oxygen inhalation. In one experiment the amount of acid fell from one hundred and thirty-four to twenty-five milligrammes.

Gubler's experiments proved that active inspiration of pure oxygen gas slowed the pulse and respiratory movements, produced a general sense of comfort, did not cause dyspnœa, and that the pause between inspiration and expiration could be prolonged from the ordinary limit of thirty to as much as ninety or one hundred seconds after breathing oxygen ; and as a result of his observations, he asserts that the blood receives the gas in proportion to its physical capacity for it, rather than in proportion merely to the vital necessity of hæmatosis. The globules absorb what they need, while any excess circulates free and enters into combination only as the hæmoglobin loses oxygen in passing through the capillaries.

Quinquaud, by certain chemical tests, which, to make them reliable, need corroboration, estimated that the capacity of the blood for oxygen in healty subjects was quite uniformly two hundred and forty cubic centimetres of oxygen to every one thousand grammes of hæmoglobin.

The experiments of Buckheim, Klebs, Husemann, Naoumoff, Beliaieff, Savory, Richardson, Ewald, Hering, and others, have not given us much additional light on the subject. They were chiefly of that crude, forced, and unnatural character, too common in physiological experiments, which adds so little to our practical knowledge of the "action" of any remedy when properly exhibited. For example, what would it profit the pathologist to learn, by cruel experiment on the lower animals, or perhaps on some helpless, hospital-stranded human wretch, that an exclusive diet of absolute alcohol produced a train of untoward symptoms and speedy death ? Would we therefore proscribe all the alcoholic mixtures—brandy, gin, wine, whiskey, etc., etc. ?

Nature does not suggest the use of oxygen in a "pure and nascent state," as used by these experimenters, and I do not consider such use of the agent, unmixed and undiluted, permissible, much less advisable, except in a few emergencies, and then only to cover the exigencies of the particular cases as presented. Hence I have little interest in the class of experiments referred to. *Tests of the gas as a therapeutic agent must be based on conditions which do not do violence to well-known and well-proved natural laws.* The safe guides in this, as in all therapeutic investigations, are common-sense, the recognition of known facts, and the simple rules of analogy. Above all, we must "take a hint from nature."

Among the acute or immediate conditions which oxygen and its congeners can be made to promptly, safely, and surely relieve, may be cited *asphyxia*, from drowning, hanging, or from inhaling carbon dioxide or other noxious gases ; *suspended animation*, from syncope and from opium or chloroform narcosis ; *poisoning*, from various toxic agents ; *spasmodic asthma* (the paroxysm); *obstructed respiration*, as in diphtheritis and membranous croup ; and in *cyanosis*, from whatever cause.

Of the many chronic conditions which may be confidently attacked, I may specifically mention *anæmia* (Birch, Demarquay, Da Costa, Dujardin-Beaumetz, *et al.*) ; *chlorosis* (idem) ; the *cachexiæ* and *dyscrasiæ* in general ; all the *indigestions* and dependent disorders (Hill, Beddoes, Birch, Goolden, *et al.*) ; *struma* and *tuberculosis* (omnes cit.) ; *empyæmia ;* chronic *glandular enlargements ; intra-thoracic* and *intra-pelvic abscesses* and *degenerations* ; *epilepsy ; emphysema* (palliative) ; *asthma* (curative) ; the *typhoid state ; zymosis, septicæmia,* and *paludal poisoning ; neurasthenia*, and nearly all forms of *neuralgia*.

From this imperfect generalization, it will not be difficult for the observant medical mind to discern the special indications and contraindications for treatment in any given case.

It may be asserted, in general, on rational as well as experimental grounds, in connection with this treatment, that those chronic cases show most marked and striking results which are selected from the great army of house-prisoners, "delicate" people who, from necessity, habit, preoccupation, or negligence, have been long deprived of wholesome air and everything like active out-door life ; or who have long suffered from miasmatic location, sedentary occupations, or unsanitary surroundings ; or from those who have been too tenderly reared—over-coddled (and this virtually includes every close resident of a populous city). To these may be added the phlegmatic, the "lymph-albuminous," and the lazy—of whom every community shows numerous examples—patients with sluggish circulation, small respiratory apparatus, torpid or enlarged livers, fatty heart or kidneys, and with habitually retarded excretory functions generally.

As far as individual experience with oxygen goes—my first cases were treated sixteen years ago—I have found thoroughly satisfactory, and in some instances very remarkable, results in cases of inveterate asthma. As a palliative of the immediate attack, a mixture of oxygen and nitrogen monoxide has invariably given instant and happy relief ; and the continued use of the two, variously modified, has never failed, in my hands, to effect a, to all appearances, complete and perfect "cure." If more extended trial proves equally successful, the treatment might very properly be termed a "specific" in the treatment of this distressing malady, which so often resists all ordinary as well as extraordinary measures.

In the severer forms of the indigestions the results have been scarcely less brilliant. Scanty or suppressed secretions are gradually restored, absorption and assimilation resume normal activity, and the functions of depuration and defecation, long deranged, obstructed, or interrupted, are surely, normally, and in a medical sense permanently restored.

Hill's first experiments with oxygen (1820) covered cases of hydrocephalus, epilepsy, chronic arthritis (gouty ?), paralysis, and morbus coxarius. In each of these he reported flatteringly encouraging results.

Another, by no means unimportant, but as yet almost wholly ignored use for oxygen, is in connection with the administration of anæsthetics. On purely rational grounds, as well as from some years of practical experimentation, I am thoroughly convinced that the dangers heretofore presumed to be inseparable from the use of ether, chloroform, and other anæsthetics can be reduced to a minimum, if not rendered altogether nil, by the timely, previous, and perhaps occasionally subsequent exhibition of oxygen. A few inspirations of the gas, slightly diluted, taken just before inhaling chloroform or other anæsthetic, while it does not interfere with the degree of anæsthesia produced, effectually prevents the usual untoward symptoms—nausea, headache, delirium, etc. And while not materially abbreviating the stage of complete anæsthesia, it shortens the recovery stage and effectually forestalls the symptoms of imminent danger which so frequently alarm the operator and jeopardize the life of the patient.

In the use of nitrogen monoxide as an anæsthetic in short surgical operations, dentistry, etc., the effects are much more desirable when a certain percentage of pure oxygen is added.

On this point I would quote a summary of results arrived at by Dr. Klikowitsch after a series of experiments in Prof. Botkin's laboratory, at St. Petersburg (*Virchow's Archiv*) :

1. Anæsthesia induced by it [nitrogen monoxide] is closely associated with insufficient oxidation of the blood, and hence not absolutely free from danger.

2. The association with it of twenty per cent. of pure oxygen completely removes all possibility of asphyxia, without interfering with the completeness of the anæsthesia.

3. By the use of this mixture the heart-pulsations of healthy subjects are increased, the pulse-wave diminished, respiration increased in depth but decreased in frequency; these effects lasting from three to five minutes.

4. In four cases of weak heart-action, the exhibition of this mixture produced no unfavorable symptoms. On the other hand, the pulse increased in strength and decreased in frequency; these effects lasting from one to two hours.

5. In cases of disturbed respiratory innervation, the mixture rapidly removed the symptoms of deficient blood-oxidation and regulated the respiratory rhythm.

6. This mixture quickly relieves suffering in angina pectoris, and when pushed, produces very perfect transient anæsthesia.

7. It is preferable to chloroform as an anæsthetic in labor.

8. Vomiting and cough of reflex origin are arrested by a few inhalations of these mixed gases.

(To be continued.)

A PLEA FOR THE ARTIFICIAL FEEDING OF INFANTS WITH COWS' MILK.[1]

By JOHN BINNIE, M.D.,

POYNETTE, WIS.

I ADMIT that nothing is equal to a healthy mother's breast; I as truly believe that many a mother's milk is not so good as proper artificial feeding, and I would recommend artificial feeding more frequently did I not know the great liability to carelessness on the part of the nurse in causing sickness, and even the death of the child. My experience has been quite extensive, but entirely with cows' milk, except in two cases, where we added an infant food. I can say nothing of the various prepared foods and milks sold by the trade. As I live in a healthy agricultural district of Wisconsin, among mixed nationalities, I advise the selection of a good healthy cow, between the age of four and ten years, of mild disposition, which has been giving milk from four to eight weeks previous to the birth of the child.

The selection made, she should be cared for as follows, viz.: fed on good clean grain, and hay free from *must*. Roots, if any are fed, should be of good quality, and she should have plenty of good clean water from a living spring or well. Her pasture should be Timothy grass or native grass, free from weeds; clover alone is bad. When mixed with other grasses it will do. She should be cleaned and cared for like a carriage-horse and milked twice a day. In a few instances, during the very hot weather, I have recommended milking three times a day. The milking is always to be done at the same time and by the same person. This is very important, as those having experience with cows will readily understand. The milk should be kept in a cool place, away from vegetables of all kinds, or any odors, as milk is exceedingly sensitive to all such agents. You must caution the nurse to be especially careful during thunder-storms, as milk will sour then do what you will.

Further, I believe some cows are unfit by nature for feeding infants. In feeding the infant everything connected with the utensils must be kept scrupulously clean. Take three or four parts of warm water to one part of milk, and a little fine white sugar; bring all to the temperature of the body. Give the child about two ounces every two or three hours. This strength is generally sufficient for the first two or three months, when you will gradually increase the proportion of milk, so that by the time the child reaches four months it will be taking milk and water about equal parts, and an increased quantity. These are general remarks, and may require changing to suit individual cases. No absolute rule can be laid down that will be suitable to all cases. The condition of the child must be the guide. Should the child appear to be insufficiently nourished, increase the quantity of milk to water, or use barley-water in place of simple water, especially so if any tendency to diarrhœa is present. I have seen cases of diarrhœa from too much water yield at once to an increase in the proportion of milk and the substitution of barley-water. You will also get diarrhœa from too great a proportion of milk, or if the quantity taken be too great; the physician must be on his guard to determine which cause is operating in the individual case. When the food is too rich, the diarrhœa generally follows immediately upon some change that has been made in its food, or the child may become fleshy at first. And this misleads both the nurse and physician; they reason that the child has been doing better since the last change in its food. In these cases we often see preceding, or simultaneous with, the onset of diarrhœa a crop of red raised spots on the face or extremities, or both, of the child. This, with the fact that it had increased rapidly in adipose tissue for a time, should call our attention to its food as being too rich or too great in quantity. It may call for an examination of the condition of the cow or her pasture. I believe pure clover very liable to produce this eruptive condition of the child.

The dangers from overfeeding, whether by too large a proportion of milk, or too great a quantity given, are greater than the opposite conditions, especially so during hot weather. The cases are rare where the child can take pure milk with safety before the ninth month, and according to my experience not before the year.

I think well of barley-water during the heat of summer and at any time when a tendency to diarrhœa exists, and I doubt not it might be of service in the opposite condition.

An infant food, added to the milk as before prepared, did well in my two cases. As before stated, the condition of the child is the best guide. When doing well, let it alone and make as few changes as possible. Increase very gradually the strength of its food.

I do not allow any solid food until after a number of teeth are through. No table-feeding of any kind. I have seen children fed as above never sick a day, and as healthy as any I ever saw nurse a mother. I have seen the opposite from a violation of the rules continue until the nurse became more careful. Such carelessness on the part of a nurse ought not to condemn artificial feeding. I am fully persuaded that a child can be raised with as much certainty of living as when nursing the mother, if the necessary care is taken. The causes of failure, as I have found them, are:

1. Want of cleanliness of the utensils.

2. Carelessness in the preparation of the food, as to the exact proportion of milk and water, at each meal.

3. The want of regularity as to time and quantity of feeding.

4. Changing from one cow's milk to another, or using mixed milks of different cows.

5. Allowing the child to nurse or drink too rapidly. The slower the food can be taken without tiring the child the better. Making any of the above mistakes may produce derangement, while some children are permitted to violate them all and live, thus proving the exception to the rule.

I have not written this either to recommend or condemn any artificial foods, or in any way to detract from the value of them; but I have thought there was a tendency among some of the profession to make the artificial feeding of infants altogether too artificial, and to try and supplant milk entirely, or give it, to say the least, a secondary place. This cannot be done successfully. We had better devote more time and money to getting pure fresh milk; then, if thought best, add your artificial foods.

[1] Read before the Columbia County Medical Society, July 31, 1884, held in Portage.

A CASE OF TRAUMATIC TETANUS CURED BY THE INTERNAL AND LOCAL USE OF SULPHATE OF MORPHINE.

By J. W. STICKLER, M.S., M.D.
ORANGE, N. J.

On June 4, 1884, I was called to see T—— J——, aged eight years. In attempting to cut some hay in one of the old-fashioned hay-cutters, he brought the knife down upon his left middle finger, about midway between the tip and the first joint. As the cut seemed to extend about half through the finger I thought it would be wise to endeavor to save the part by carefully coapting the cut surfaces. To do this I inserted a few fine sutures. The wound, however, did not unite, suppuration causing the surfaces to separate. As it was manifestly useless to again attempt to save the end of the finger, I determined to amputate at the first joint. In this operation I was assisted by Dr. J. Y. Simpson. The flaps united quickly, and the boy did very well till June 18th, when he developed tetanoid symptoms. He had pain along the anterior attachment of the diaphragm and in his back, difficulty in swallowing, and spasmodic contractions of the muscles about his mouth. His lower extremities were at once placed in a hot mustard bath, hot poultices applied to his abdomen, and a mustard plaster to the back of his neck. He was then given, per orem, ℥x. of Magendie's solution of morphine, and wrapped in a blanket. The following day there were frequent contractions of the muscles of the face, throat, and trunk; pain in the epigastric region was quite distressing; swallowing of solid food was difficult, even water excited a mild spasm of the throat muscles. At this stage of the disease I asked Dr. Wm. Pierson to see the case, in consultation. He suggested the application to the part of poultices containing morphine (gr. j. each). He was also given twice daily (9 A.M. and 4 P.M.) twenty-five to thirty-five drops of Magendie's solution of morphine, per orem, the dose varying within the limits named, to suit the emergency of the case. Large flaxseed poultices were constantly applied to his back and abdomen, and he was carefully shielded from draughts. After beginning this treatment there was sufficient opisthotonus to make it possible to pass the hand and forearm between the bed and the patient's back. This condition lasted about seventy-two hours. The mouth at that time could not be opened wide enough to admit the index finger. His food consisted of milk and broths. Constipation was a troublesome complication, requiring the occasional use of croton-oil in one-drop doses.

By degrees the rigidity of the various muscles disappeared, the patient being restored by July 1st to a normal condition, so far as the use of the various parts of his body was concerned.

Malarial Gastralgia.—Dr. N. O. D. Parks, of Ashton, R. I., writes: "The following case may prove interesting as an example of the hydra-headed manner in which malaria manifests itself. K. H——, a young married woman, has been subject to severe attacks of gastralgia since the birth of her first child about ten months ago, when they occurred for the first time, and have been hitherto amenable to treatment. She had one on June 7th, and called in a physican who administered morphine hypodermically. I was sent for June 10th. She seemed to derive no benefit from morphia, viburnum, Hoffmann's anodyne, nor any of the usual remedies, external or internal, the paroxysms apparently subsiding of themselves after the lapse of four or five hours, to return with increased violence, at first every other day, but finally they recurred every morning, accompanied by vomiting, which brought no relief. This periodicity led me to administer quinine in full doses, which promptly aborted the attacks. After three days I lessened the amount of quinine, and prescribed arsenic in small doses, and she has had no recurrence of the malady."

ON MURIATE OF LIME.

By JOHN C. PETERS, M.D.,
NEW YORK.

Some time ago The Medical Record had a very suggestive article on the "Uses of the Muriate of Lime." I have found additional material in the works of the late Dr. I. Warburton Begbie. In small and repeated doses it produces increased secretion of mucus, urine, and perspiration; in large doses it is irritant. Fourcroy and many physicians of his time (1775–1809), had much confidence in it against scrofula, but especially the celebrated Dr. Beddoes, who gave it to nearly one hundred patients, in doses of ten drops of the saturated solution to young children, up to two drachms to adults, three or four times a day. He says there are few of the common forms of scrofula in which he has not had successful experience with it. He gives the case of a boy, aged seven years, with a voracious, almost insatiable appetite, protuberant belly, diarrhœa, emaciation, hectic fever, and night sweats, who recovered in two months after taking ten-drop doses, gradually increased to forty; which he took with pleasure in small beer or coffee. The purging stopped first, and then the hectic fever. Also the case of a young lady, aged thirteen, with the same symptoms, and in addition, swelled feet, cough, and difficult respiration. In three days, after taking twenty-drop doses, increased to sixty, the purging stopped; in nine days the feet ceased to swell, while the hectic symptoms and cough disappeared in three weeks, followed by recovery with great gain in flesh in six weeks. Dr. Begbie says he has often cured similar cases, especially the chronic diarrhœa of young children when associated with hectic fever and tumid belly.

Dr. James Wood says he would feel in some degree accountable for the sufferings of all thus diseased if he did not make its virtues known. He used it largely in incipient phthisis, in all the forms of scrofula, and in hectic fever from, or with great discharges. Dr. Ingraham found it to possess great powers in discussing tumors and obstructions of various kinds. The opinions of Dr. James Sanders have already been given in The Record.

Dr. James Hamilton, professor of midwifery in Edinburgh, speaks of it in high terms in scrofula, and Dr. Anthony Todd Thompson asserts that he has seen more benefit from its continued use than from any other medicine. Dr. John Thomson refers to the three muriates, those of soda, baryta, and lime, in scrofula, but seemed to prefer cod-liver oil and iodine.

Begbie has used it most successfully in struma, marked by enlargement of the glands of the neck, after iodine, iodide of potash, and iron and cod-liver oil had failed; and says it is in his power to assert that many instances of very great enlargement of the cervical glands have yielded to its use; also in glandular swellings of the axillæ and inguinal regions, and of the deep-seated lymphatics of the pelvis. It often requires to be taken for a considerable time, for weeks or even months, before its beneficial effects are visibly produced, Usually, however, in the course of a few weeks there occurs a certain degree of softening in the glandular tumors, and the component glands of the mass are more easily distinguishable. With the gradual subsidence of the enlargement there is a notable improvement in the patient as to appearance, appetite, and digestion. If the remedy is stopped too soon, relapses may occur. He has often given the medicine with the greatest regularity for one or two years. He thinks it is best taken in milk, but some prefer water. It has a mawkish, disagreeable taste, which is partly or wholly concealed by milk, but many gradually acquire a liking for it and have a great disinclination to stop it.

Dr. Begbie gives the case of a young woman, with a really frightful disfigurement of the neck, who was decidedly improved in three months, and was in a very satisfactory state in a month more. He refers to two

others. In many cases the disorder will return slightly after the muriate of lime is stopped, but invariably yields again to the remedy, and then the cure is permanent.

In tabes mesenterica, with protracted diarrhœa and exhausting perspirations, the medicine is equally useful, causing a subsidence of the hectic fever, an improvement of appetite, a gaining of flesh and strength, and a gradual restoration to health. In grave disorders of the bowels it arrests diarrhœa, promotes digestion, and favors nutrition. Also in a class of cases marked by depraved appetite, loss of flesh, pallor, protuberant belly, wasted limbs, and more or less febrile excitement of an intermittent or remittent hectic type, with two distinct paroxysms of fever every day. It checks purging, lessens the fever, allays the inordinate appetite, and ultimately restores the patient to health. The red appearance of the tip and edges of the tongue fades away, and the nausea ceases. It acts quicker than lime-water.

It has proved useful in lupus exedens and non-exedens, in local psoriasis, in some instances of ozæna, and in chronic tonsilitis. The recognized dose is ten to twenty grains. The Edinburgh solution has ten grains in every fifteen drops, which is the average dose for a young adult, to be given three times a day in milk. Gradually the doses may be increased to thirty or forty drops. It lessens the acidity of the urine remarkably. All these good effects Dr. Begbie has noticed again and again.

ACUTE IMPULSIVE INEBRIETY.

By T. D. CROTHERS, M.D.,

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This term describes a class of cases who suddenly use alcohol to great excess, either for a definite period, or constantly until death or dementia terminates their conscious existence. In many cases they are closely allied to acute mania, and merge into it, but although of the same family group, there are distinct differences. Clinically two classes are prominent, and both begin the same way, but after a time they diverge widely. In one the use of alcohol is continuous, and only varied by the difficulty of procuring it, and the change to opium or other narcotics. In the other a distinct free interval of sobriety follows, usually of definite length, which becomes shorter as the disease progresses. The latter is of a dipsomaniac type, with epileptic tendencies, and may at last become what has been erroneously termed alcoholic epilepsy. Criminality and many strange psychical manifestations appear in this class. The first class of continuous drinkers are marked by the early and profound failure of all the higher brain qualities, dropping quickly from positions of character and reputation to that of moral imbecility, and apparent unconscious realization of duty and obligation to others. My object is to trace some of the apparent causes and symptoms of the early premonitory stage of this affection. These cases have no particular stage of moderately drinking, or period in which wine, beer, bitters, or other of the milder alcoholic drinks are used. They begin at once with poisonous excessive doses of alcohol. Despite all theories it is an unmistakable fact that this condition is an explosion, or the bursting into activity of a long train of causes unnoticed before. It is a sign of brain exhaustion, of diseased conditions that have suddenly concentrated into a craving for the narcotic effects of alcohol. This uncontrollable desire for alcohol or other narcotics is a symptom of profound disease and degeneration, which may be regarded from two points of view, namely, as a congenital or acquired condition.

In the first, or inherited group, I find such cases as the following: A man of good health, temperate, and of reputation, who has insane or inebriate ancestors, but who has lived an exemplary temperate life, drinks suddenly to great excess and never recovers. It may follow some business losses or social disasters, and in many cases it comes on without the slightest reason that is apparent, like a lightning-flash in the clear sky. Another case would be of some hard-working, business, or professional man, who has given signs of nerve and brain failure for years, then all unexpectedly lapses into profound inebriety. An epileptic neurosis or consumptive and hysteric diathesis is found to be present.

In other cases signs of brain defects from heredity are present. Thus a passionate, unreasoning, impulsive brain power; or a brain on the borders of delusions and hallucinations; or a changeable, uncertain brain force, exhibiting many hints of defect will suddenly develop into inebriety. Some writers assert that in such cases inebriety is merely an outlet for insanity, or insanity in another form, which would appear with certainty in the natural progress of the case. This would be expected if a state of moderate drinking was present, but in such cases absolute abstinence from all use of spirits exists up to the moment of the outbreak. In some cases these apparent inherited nerve defects are obscure and unnoticeable, except from an intimate acquaintance, and the outburst of inebriety cannot be traced to any present exciting cause; the only fact of significance is that they had an insane or inebriate and neurotic ancestry. A vast realm of clinical and psychological facts stretch out from this point entirely unknown.

Another group of cases who have a decided neurotic ancestry, and themselves exhibit marks of it in their actions and thoughts, become impulsive inebriates from distinct causes that are traceable. Thus a temperate man of this class will suffer some great loss of property, or of relatives by death; will meet some unexpected disaster, which will profoundly impress and change all his functional activities. After a short incubating period he will begin to use spirits to great excess, either in secret or openly. A prominent governor of a great State, temperate and robust in mind and character, whose father was a hard-drinking man, was suddenly overwhelmed with sorrow at a social wreck in his family. Three days after he went to his stable with a case of brandy, and drank to excess for four days, concealed by his hostler. From this time he has continued to drink at intervals, without control of himself or without conscious reason, and is now a confirmed inebriate invalid.

In another case of a man of prominence, with an inebriate ancestry, sudden bankruptcy through the dishonesty of partners precipitated him into impulsive and profound inebriety, ending fatally in a few months from acute pneumonia. In these cases prominent exciting causes, particularly great strains and profound emotional changes, have fanned into activity a latent neurosis, which otherwise might have remained dormant.

The same results are seen in cases who suffer from some acute disease that is profound and prolonged, such as typhoid fever, malaria, pneumonia, pleurisy, gastritis, and many other diseases which positively affect the integrity of the organism, leaving an entailment or condition of debility from which recovery is very slow. In such cases, particularly where inebriate heredity is present, impulsive inebriety may spring up and go on rapidly to death. A favoring soil is present, and some unknown germ cause has developed it. An almost endless variety of conditions, involving every form of strain and drain, of functional and organic activities, starting from a defective brain and nerve soil merge into this malady. In the acquired form or group the same conditions are seen without the apparent heredity. It would seem that all the conditions have grown up from neglect and the surroundings. A common illustration is seen in the constantly increasing army of business men who steadily overwork, and neglect to obey the simplest laws of health, thus becoming more and more unfitted for the trials and duties of life. Suddenly, after some great loss and strain, they become inebriates and drink without any intelligent reason why they do so. The class who have used alcohol in moderation for a long time, and suddenly

become pronounced inebriates, are very common in all large cities. But the brain-workers, who are intemperate in almost everything except the use of alcohol (in this they are total abstainers), are furnishing an increasing proportion of cases of this form of inebriety. A man who occupies a position as a worker and producer, who is a power in his circle, suddenly poisons himself with alcohol, and keeps it up day after day until death brings relief.

If the causes are not traced to heredity, they will be found in some condition of bad living, overwork, want of rest, and imperfect nutrition. Psychical traumatism is apparent in a certain number of these cases. As an illustration, lately prominent in a distant city. A clergyman, a total abstainer, a man of unusual force of character and health, saw his daughter dashed down an embankment and killed. The next day after he drank to intoxication, and is to-day a periodical inebriate of the worst type. In another case a man of repute was intoxicated at the funeral of his wife and never recovered. In a case under my care a temperate man began to drink to great excess on the sudden return of his son, who was supposed to have been killed on the battle-field. In other instances the mental shock from sudden poverty or unexpected wealth have resulted in this form of inebriety.

Undoubtedly some profound change and alteration takes place in the central nerve system, followed by psychical pain and exhaustion, for which nothing but alcohol brings relief. In these cases a substratum of inherited degeneration may favor this state, or condition of impairment from disease or other cause, which intensifies the inebriety, making it more incurable.

Many of these cases of acute impulsive inebriety are concealed with most extraordinary judgment on the part of the victim. He has become a periodical inebriate, and from symptoms he anticipates the approach of the paroxysm, and conceals himself from observation until the drink storm has passed. Such cases leave work suddenly, and very strangely disappear from the circles of their acquaintances, and a few days or weeks later return, paler and somewhat worn, and resume work as before. This concealment may go on for years, or until death comes from some acute disease. Frequently sexual perversions are associated with this disorder; then the victim will be found in disreputable houses far away from home. Usually this class seek quiet hotels in the interior, or private asylums under assumed names. Others appear boldly in public places and at home, and seem to have lost all pride of appearance, and when efforts are made to restrain them from the drink used, resort to any substitute, and usually find some form of opium or preparation of chloral equally satisfactory.

In a certain number this form of inebriety is followed by paralysis in a year or more, showing that it was but an early state of other disease. In other cases dementia appears, and the drink craving subsides. In others opium and chloral inebriety come on, from which recovery is rare. The prognosis is unfavorable. The craving for alcohol may die out, but other diseases will follow. In many cases acute tuberculosis follows, and in all instances general failure of all the functions point to the gravity of this affection.

Prompt, early recognition of disease and diseased conditions are demanded in all these cases. Questions of vice, will-power, and morals are absurd; medical means and remedies are wanted; for no matter what the case may be in other respects, it is a distinct neurosis that requires positive practical methods of treatment.

The quarantine of an asylum or hospital is needed, where every condition of surroundings can be under control, and where every source of irritation that is removable can be reached.

The work of restoration involves long time and every appliance of science and art which can be brought to build up and strengthen the brain and nerves. If the case has merged into a periodical condition, the paroxysms must be anticipated in the treatment, and all means used to abort and lessen their intensity.

In some instances these periods return with great exactness, which can be anticipated within a day or hour. Then the value of hospital treatment and medical aids are indispensable. Many instances are on record of persons able to realize the approach of these paroxysms, and who place themselves under control or in favorable conditions to pass them with the least injury. One such instance is that of a temperance lecturer who became an inebriate from the loss of his property, followed by acute meningitis and inebriety. He lectures on temperance during the free interval between the drink paroxysms. These return at intervals of ninety days, rarely ever exceeding this time more than a day. After a time he is conscious of the approach of these paroxysms, in certain nervous symptoms, and goes to jail and is locked up in a cell for a week, being fed on beef-tea and milk. Later, he went to a hospital; then, as the paroxysms grew less he could be restrained in a private house or hotel with the door locked and his clothes removed. Now, five years later, the paroxysm still returns, with the same regularity as to time, and he goes to some retired place where he can be locked in; has his clothes taken away, and drinks large quantities of milk, and uses a bromide prescription of about two hundred grains a day for two days or more. After a week he fully recovers and resumes work again for ninety days more. Here the quarantine of a hospital is absolutely essential; nothing but restraint will enable him to pass this critical point.

The continuous inebriate of this class needs not only restraint, but change of surroundings both mental and physical. He is exhausted, and must be built up; his mind must be turned to other channels, and all the surroundings must be stimulating—brain rest, muscle rest, nerve rest, freedom from all strains and drains—these are the corner-stones of treatment.

These cases are not dipsomaniacs; for in nearly all instances there is no delusion or hallucinations; the desire for alcohol is the craving for relief; for a condition of psychical pain or agony that is most positively checked by alcohol. If this drug is not obtainable, other compounds are used. If opium in any form had been at hand, and its first effects pleasant at the beginning, it would be used in preference to alcohol. It is not alcoholism, for the use of this drug is only a symptom of other and more serious trouble. The desire for alcohol is fully satisfied when certain effects are obtained.

These cases are unrecognized except in the most vague, general way. Then simply as drunkards who have occupied better positions, and are now noted for what is termed depravity and great changes of character and purposes of life. Physicians who are called to treat some extreme stage of these cases recognize a realm of psychological mystery which they are unable to solve. Thus the case goes on down to death, unknown and unrecognized, and of course nearly all the means and remedies that are used intensifying the very conditions they seek to lessen.

In a summary of what is known, the following may be stated as a grouping of outline facts:

First.—Acute impulsive inebriety appears in persons previously temperate, who have not used alcohol before. It is marked by profound precipitation and rapid degeneration both mentally and physically.

Second.—All cases can be traced to congenital and acquired conditions, both of which are combined in some cases. Certain causes are found to be peculiarly exciting, and this form of inebriety follows with great certainty. All cases merge into periodical or continuous drinking.

Third.—In the treatment means of prevention and means to conduct the case to a successful termination in recovery should be sought. Quarantine hospitals are

essential, together with all other means which science and art can suggest.

Fourth.—These cases should receive thorough medical study, and all means for relief should be based on such study and its conclusions.

Progress of Medical Science.

Wholesale Poisoning by Illuminating Gas.—An account is given by Dr. G. E. Bentzen, in the *Nordiskt Medicinskt Arkiv*, vol. xvi., No. 1, 1884, of the poisoning of all the inmates of a house by illuminating gas. The house was three stories in height and contained sixteen rooms, occupied by six families, but there was no gas supply and not a single gas-pipe in the house. There had been a break in the gas-main in the street, and from this the gas passed through several feet of earth into the cellar, and was thence diffused through the whole house in such quantity that every inmate suffered in nearly equal degree. The author cites the circumstance as showing how readily the emanations from the soil may pass up into the different sleeping apartments on the several floors of a dwelling.

Embolic Infarction of Muscles.—That the muscles, like other organs, are liable to be the seat of embolic infarctions is a subject which is discussed by M. Girandeau in a recent article, and he thinks that the rarity of this event is attributable partly to the fact that the muscles are seldom examined post mortem, and partly (probably mainly) to the readiness with which collateral circulation is established in cases of blockage of a muscular artery. It is different in the case of pyæmia, where muscular metastatic abscesses are frequent; but in ordinary cases of cardiac disease, where the viscera show ample evidence of embolism, there are very few records of muscular infarction. Cornil and Ranvier, admitting this rarity, state that they have met with two instances, and that they were characterized by absence of hemorrhage. Girandeau supplies notes of three cases. The first was a case of chronic mitral disease with general atheroma. The right sartorius muscle was found to be ruptured, the broken ends embedded in hemorrhagic effusion, and their muscular fibres granular. The spleen contained two old infarctions. The second case of long standing mitral and aortic disease, with arterial atheroma, exhibited a firm, yellow-colored mass in the substance of the pectoralis major muscle, sharply marked off from the healthy tissue, and resembling a visceral infarct. The spleen, kidneys, and brain were also the seat of embolism. A third case, quoted from Lefevre's thesis (1867), was of the same class, and was further complicated with dry gangrene of the left foot and leg. In this case a yellowish gray mass of degenerated muscular tissue occurred in the substance of the vastus externus muscle. These three cases were, it will be seen, of chronic heart disease, and Girandeau asks whether these muscular infarctions could not also occur in the course of acute endocarditis in young subjects. *A priori*, such an event is not impossible; but some experiments made by him at Alfort were wholly negative in their result. He concludes that many conditions may be necessary to the production of the event, among which he enumerates degeneration, roughening, and inelasticity of the arteries; an enfeebled heart; and a more or less marked asphyxial condition, impairing the nutrition of the muscle.—*London Lancet.*

The Genesis of Melanæmia.—Professor Marchiafava and Dr. A. Celli have recently published a most important paper (*Memorie della R. Accademia dei Lincei*) on this subject, giving the results of experiments and researches made in the laboratory of pathological anatomy in Rome—the title of their paper being, "The Alterations of the Red Blood-globules in Malarial Infection, and the Genesis of Melanæmia." It will be interesting, therefore, to learn what were the alterations found The method used for examining the blood was as follows: The blood was taken from a small prick in the finger of the fever patient in different stages of the fever, the finger being previously washed with alcohol. On the drop of blood thus obtained a cover-glass was lightly pressed; it was then pressed against another glass, and the two slipped over each other so as to get a thin film of blood; the glasses were then passed through the flame of a spirit-lamp, so as to dry them. On this preparation one or two drops of an aqueous or alcoholic solution of methylene-blue, recently filtered, was dropped; it was then washed and mounted. By this method the normal red globules were slightly colored blue, unless the coloring matter had been washed out too soon. The protoplasm of the white globules was colored a pale blue, while the nucleus took a deep color. In an individual affected with malaria, however, there were found, in the midst of the normal red discs, other red globules whose protoplasm was altered, this being very evident in those discs which were not colored. These alterations consisted in the presence in the globules of small corpuscles, varying in number, different in size and form, which were colored blue with more or less intensity, but always so much as that they could be distinguished from the protoplasm of the red disc, whether colored or not. These corpuscles, passing from the smallest to the largest forms, are seen as: 1. Granules, generally rounded, which are usually colored a more or less intense blue, and somewhat resemble micrococci; one or more are found in a globule, and sometimes one-third of the red disc will contain one, two, or more corpuscles. 2. As corpuscles larger than those just described, with the appearance of rings in the middle, which may occupy a third or one-half of the red disc. 3. As corpuscles much larger than the first, uniformly colored, or with spaces of spherical, ovoid, fusiform or triangular, which generally contain granules of black pigment in the centre. The larger masses invade, in some red discs, all the protoplasm colored by the hæmoglobin, of which only a very small portion may remain. With these red discs, thus altered, are found bodies colored as the masses above described, and containing pigmentary granules. These bodies evidently represent the last stage of alteration of the red disc, which is thus converted into a body deprived of hæmoglobin, containing pigment. These alterations of the red discs may be followed in all their stages until the conversion of them into pigmented masses. When the red disc contains one or more pigmented corpuscles and a certain portion of its colored protoplasm remains, its normal elasticity seems to be preserved; but when converted into a yellow pigmented body, its elasticity may, or may not be retained, and the disc will adhere to the cover-glass without pressure. Such is a general *résumé* of the microscopic appearances of the blood in malarial subjects, especially during the febrile movement. Are these alterations always found in malarial infection? In some cases the altered red discs are few, in others very numerous; in others still they cannot be found at all. But this is true not only in cases of simple intermittent, but in aggravated cases of malarial infection, and even in the forms of comatose pernicious fever. When these alterations are found the patient always has a peculiar yellowish earthy appearance, the feebleness is very great, and convalescence is more slow, and restitution to health more difficult. Important information might be gained by studying the relations between the degree of alteration of the blood and the clinical course of the malarial disease. The examination of the fresh blood from a case of algid pernicious fever showed the presence of pigmentation in numerous white globules; the red discs were not altered. After coloring by the method indicated, however, the corpuscles were found in the red discs. Microscopic examination of the organs and blood after death showed the described alterations; the same was true of

two other characteristic cases of malarial infection terminating in death. From this it seems demonstrated that in malarial infection an alteration of the red discs takes place, running through various stages, and which commences with the presence of granules and corpuscles, generally spherical, which are colored by aniline. This process is continued by the growth of the corpuscles, by their fusion and the formation of dark pigment in the form of granules and masses, and terminates with the reduction of the red discs into a yellowish pigmented body which is entirely broken up, while the pigment is freed and is deposited in the various organs. But what is the nature of this alteration of the red globules? Without doubt it should be regarded as one of a regressive nature, or better, we may accept Tommasi Crudeli's view, that it is a necrobiosis of the red disc, which is now no longer a red globule, but a circulating body incapable of performing its normal functions. This being admitted, it may be asserted, as regards the seat of the formation and the genesis of the pigment of melanæmia: 1. That the pigment is formed in the blood-vessels, and in the circulating blood; and, 2, that its origin is the coloring matter of the red disc, and that it is formed in the protoplasm of this disc. The first conclusion is evident if it is admitted that the pigment is formed in the circulating red discs, and it is in accordance with what has already been shown by Kelsch and Arstein. The second conclusion is not less evident, since the dark pigment is deposited as the red discs are decolorized, and all the stages of this loss of color and pigmentation may be successively followed. It should also be stated that in certain cases, in which there is so great a destruction of the red discs, there are also found nucleated red discs, macrocytes, and discs differently colored from those ordinarily found. It is well known that nucleated red discs are not found in the normal extra-uterine circulation, except during the first few days after birth; but they are very frequently found in essential and symptomatic anæmia. But hitherto they have not been described in the acute stages of infection. Their presence in acute malarial infection, as well as in the periods of convalescence, is doubtless directly related to the direct destruction of the red discs, and is a sure indication that the functions of the hæmatopoietic organs are so stimulated by the destruction of the discs that they are manufactured more rapidly than is necessary, and are thrown out into the circulation before they have lost their nuclei. These experiments, though not yet complete, certainly explain the alterations of the red disc caused by malaria, and go far toward clearing up the genesis of melanæmia. And although the absence of these alterations in the red globules does not exclude malarial infection, their presence proves it conclusively, as they have been found in no other disease.

Treatment of Laryngismus Stridulus.—In a clinical lecture on this complication of rickets, Professor Widerhofer (*Allgemeine Wiener Medicinische Zeitung*, July 29, 1884) recommends traction of the tongue during the attack, to prevent closure of the glottis, or sprinkling cold water in the face. In the intervals he gives bromide of potassium, and regards this as almost a specific for these spasmodic attacks. The remedy must be given in rather large doses, four grains morning and evening, gradually increased to eight grains. In one or two days, he claims, the attacks will have wholly ceased to occur.

Death from Injection of Iodine in Spina Bifida.—Dr. Woltering relates the following case in the *Allgemeine Medicinische Central-Zeitung*, August 13, 1884. He first operated upon the child when she was four days old, simply puncturing the sac and making pressure with adhesive plaster and a piece of lead. All went well for four months, but the parents were careless about keeping the compress properly adjusted and the tumor reappeared. It was then determined to use iodine. The sac was punctured and about two tablespoonfuls of clear spinal fluid evacuated. One tablespoonful of a solution containing seven grains of iodine and twenty grains of iodide of potassium to the ounce of water was then injected. As the sac was filling, it was noticed that the child stopped breathing. The solution was immediately pressed out again, and every effort made to resuscitate the child. The heart continued to beat for some time, but, in spite of artificial respiration maintained for half an hour, death could not be averted. This case well illustrates the danger of this procedure, immediate paralysis of the respiratory centres having followed an injection of only about three grains of pure iodine.

Tuberculosis of the Tonsils.—It was formerly supposed that tuberculosis of the tonsils never or at most very rarely occurred. In order to determine the correctness of this supposition, Dr. F. Strassmann (*Centralblatt für Chirurgie*, August 16, 1884) has examined these organs in a number of individuals dead of tubercular affections. In nearly every case of pulmonary phthisis he found turbercles in the tonsils, while in those who had died of tuberculosis of other organs these bodies were healthy. The result of these investigations would seem to show that the tonsils become infected directly by the tuberculous matter in the sputa, since they were diseased only in those cases in which the lungs were affected. Tuberculosis of the tonsils seldom leads to extensive caseous degeneration or destruction of the organs. Small miliary tubercles and few bacilli are found.

Treatment of Pseudarthrosis.—In a monograph recently published in St. Petersburg, Dr. A. Karmiloff reviews the different methods of treatment of ununited fracture, and gives the indications for the employment of each. He regards irritation of the integument by iodine, blisters, etc., as of no value, except in cases of retarded consolidation merely. The method of rubbing together the ends of the bone was successful in about 10 per cent. of the reported cases. It is indicated only in those cases in which the opposing ends of the bone are thick and lie in close apposition. This procedure is not always a safe one, and has sometimes been followed by very serious consequences. Dieffenbach's method of inserting ivory pegs has resulted successfully in 43.5 per cent. of operations on the thigh and arm, and in 80 per cent. of operations on the forearm and leg. The author, however, believes this percentage is too high, many failures not having been reported. The method is only useful when the ends of the bone can be kept firmly in position, and when the tissues respond readily to slight irritation. Electro-puncture, the subcutaneous injection of chemical irritants, the insertion of needles into the tissues between the ends of the bone, and the pinning together of the fragments, are all procedures that the author regards with some favor, but which he considers less effectual than Dieffenbach's method. When the ends of the bone lie near each other, are perfectly movable and thinned down, and when the tissues seem to have lost the power of bone formation, Dr. Karmiloff regards resection as clearly indicated. The resected ends are to be held in close apposition by splints or suture.—*Centralblatt für Chirurgie*, August 9, 1884.

The Cause of Puerperal Septicæmia.—In a communication addressed to the Société des Sciences Médicales of Lyons, M. Arloing (*Lyon Médical*, August 3, 1884) claims to have isolated the microbe of puerperal septicæmia. The organisms are micrococci united in the form of long chains looking at first sight like bacilli. Inoculations of rabbits with cultures of the microbe caused death with symptoms of septic poisoning. In some cases fibrinous peritonitis was found after death. He concludes, from the experiments made by him, that the different forms of puerperal septicæmia are caused by the same agent, the particular form of the disease being due to the degree of activity of the microbe. Yet he does not maintain that this micro-organism is peculiar to the puerperal state, but only that at this time the conditions are favorable to its introduction and development.

Sclerosis in Plaques following Infectious Diseases.—According to Dr. Marie, infectious diseases, such as typhoid fever, small-pox, pneumonia, syphilis, etc., may give rise to consecutive paralyses caused by *sclérose en plaques*. The author reports twenty cases taken from various sources. This view of the nature of paralysis occurring during convalescence is somewhat novel and needs further confirmation before being accepted.—*Revista Clinica e Terapeutica*, August, 1884.

Honey as a Remedy for Small-pox.—A physician of Arequipa, Peru, writes to a local journal in praise of the virtues of honey in the treatment of small-pox. A child was attacked with what threatened to be a very severe form of the disease, but to the surprise of all began to mend within a few days, and passed through a speedy convalescence without any complications. In searching for a cause of this unusually rapid recovery, it was found that the patient, whenever left alone by his nurse, had helped himself to some honey which was standing in a jar near his bed. The remedy was then tried in two other cases occurring at about the same time, and with equally favorable result. The writer seemed to think that there was something more than a mere coincidence in these cases, and hoped that others would make a trial of this toothsome remedy in order to prove its efficacy.—*La Crònica Médica*, August 5, 1884.

Treatment of Enlarged Prostate.—M. Tripier directs attention to the possibility of reducing prostatic congestion by faradization. One electrode is to be introduced into the urethra and the other into the rectum. He has also had recourse to simple intra-rectal faradization. The sittings are of five minutes' duration, and the strength of the current is to be so as to cause no pain. For hypertrophy of the prostate the author makes use of suppositories of one and a half grain of iodide of potassium and one-tenth grain of muriate of morphia.—*Lyon Médical*, August 3, 1884.

The Condition of the Ovaries during Menstruation.—Dr. Meyer has made a number of bimanual examinations of the ovaries during the menstrual period to determine what changes they undergo at this time. In some cases he found an evident increase in size; in some no change was discoverable. While these organs are usually of a firm consistence, during menstruation they are found to be elastic. In some cases the ovaries were of a more rounded form, in others there were inequalities on the surface of the organ. Sometimes he could observe no change in shape, and sometimes there were changes in both organs, or again in only one.—*Lyon Médical*, August 10, 1884.

The Action of Phosphorus upon the Fœtus.—Dr. Igacushi Moritzi Miura, of Japan, has been conducting some experiments on rabbits and guinea-pigs to determine whether phosphorus given to the mother induces any changes in the fœtus. He found fatty degeneration of the liver in the mother thirty to forty hours after poisoning with phosphorus, and the same condition, but less marked, in the fœtus. He found gastro-adenitis in the fœtus as well as in the mother. Hence he concludes that phosphorus given to the mother can pass through the placenta and exert its injurious effects upon the fœtus also.—*Centralblatt für Klinische Medicin*, July 26, 1884.

Pernicious Anæmia in Children.—Dr. Kjellberg relates the case of a child five years old who was seized rather suddenly with headache and general languor. At the same time the skin became of a pale yellow, waxy appearance, the lips were pale, and the countenance had the appearance of suffering, although the body remained plump. Soon he had dyspnœa on the slightest exertion, palpitation of the heart, an anæmic murmur was audible in the vessels of the neck, and there were hemorrhages into the retina and under the skin. The blood was pale in color, and the number of red blood-corpuscles fell away from 900,000 to 571,000 per cubic millimetre. Death followed in six weeks, in spite of arsenic exhibited in moderate dose. At the autopsy there was extensive fatty degeneration of the heart, the brain was very anæmic, and the kidneys were fatty. There was no enlargement of the liver, spleen, or lymphatic glands. This, the author says, is the second case of pernicious anæmia in childhood that is known in pediatic literature.—*Centralblatt für Klinische Medicin*, July 26, 1884.

Diagnosis of Apparent Death.—The temperature of the skin in the living subject always rises during contraction of the muscle lying immediately beneath, but after death, even during the time that the muscular contractility to electrical stimulus is preserved, this increase of heat does not occur. Dr. Max Buch sees in this a valuable sign by which it can be determined whether life is extinct. The thermometer is to be placed upon the integument before and after muscular contraction has been excited by electricity, and if the mercury does not rise at the second trial he regards the patient as certainly dead.—*Deutsche Medicinal-Zeitung*, No. 37, 1884.

Miliary Aneurism of the Stomach.—Dr. Gallard has had an opportunity of seeing three cases of hæmatemesis from the rupture of miliary aneurisms of the stomach (*Deutsche Medicinal-Zeitung*, No. 37, 1884). The first case was that of a man, fifty-one years of age, who was suddenly seized with severe hemorrhage from the stomach and bowels. He had never suffered from any gastric trouble. Death occurred in a few days, and at the autopsy there was found a small tumor the size of a millet-seed, in which there was a little opening plugged with a clot of blood. It was ascertained by injection that this tumor was formed by an enlargement of a branch of the coronary artery. A month later Dr. Gallard received another patient who had suffered for two days from severe hæmatemesis. There was no history of a previous affection of the stomach. At the autopsy the same condition was found as in the first case. The third patient had been seized while upon the street with hemorrhage from the stomach. He had for a few days complained of loss of appetite and pain in the epigastrium. The next night the patient died, and at the autopsy there was seen a tumor the size of a bean on the greater curvature near the cardiac orifice. There was a perforation at the apex of the tumor through which the blood had escaped. The tumor lay directly over a small artery, but attempts at injection failed. The only case similar to these that has been reported is one of Dr. Douglas-Powel. But here, however, there was a tubercular ulceration of the stomach, so that the aneurism could only be regarded as of secondary origin.

Antipyrin in Diseases of Children.—Drs. Penzoldt and Sartorius have made a number of trials of antipyrin in the treatment of children's diseases, and report the following conclusions in the *Berliner Klinische Wochenschrift* of July 28, 1884: 1. Antipyrin is to be regarded as a very effectual remedy in the pyretic diseases of childhood. 2. In suitable dose it lowers the temperature several degrees, and the effects continue for several hours. 3. The pulse rate is never reduced in a degree corresponding to the fall of temperature. 4. The effect upon the general condition is usually good. 5. The only disturbances that it ever causes is occasionally vomiting. When this occurs the remedy may be given by the rectum. 6. Antipyrin should be given in three doses at intervals of an hour. Each dose should consist of as many decigrammes (one and a half grain) as the child has lived years. If this dose is insufficient, as may often be the case in small children, it should be increased a decigramme at a time until the desired effect is obtained. When administered by the rectum, a single dose of from three to six times as many decigrammes as the child counts years may be given. 7. When the use of the drug has been long continued the organism seems at times to become tolerant, and then the dose must be increased cautiously.

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PROFESSOR VIRCHOW'S ADDRESS ON METAPLASIA.

We have received from our correspondent in Copenhagen the full text of Professor Virchow's address before the International Medical Congress, and are enabled to supplement the necessarily brief cabled report by a more complete abstract of the lecture. After referring to the older theories concerning the nature of the vital processes in health and disease, the author stated briefly his doctrine of cellular pathology and showed how it opposed Schwann's theory of the origin of cells from the blastema. The old theory of the identity of growth and nutrition is manifestly untenable. The end and aim of nutrition is self-preservation, while that of growth is increase of cells. When, in the latter process, two cells are formed from one, the old cell disappears, and thus we see that the plastic process, although productive, is, in a certain sense, also destructive. Thus there is a contradiction between the nutritive or trophic and the formative or plastic processes, which no amount of reasoning upon the materials affecting nutrition and growth can explain away. Because the same matter is used at one time for nutrition and at another for the increase of cells, it in no way follows that the processes in the two cases are identical, and still less that the cause of both nutrition and growth resides in this matter. All organic activity, the speaker insisted, resides within the cells. There is a wide difference between cellular nutrition and the nourishment of the individual. The former only begins where the latter ends. Living tissues may take up materials without using them in nutrition, as, for instance, the intestinal epithelium, and the hepatic cells take up fat during the process of digestion, but they soon give it off again. In the process called assimilation, in which the cells take up matters from the fluids and then form them into the necessary tissue materials, nutrition and growth seem to approach each other; but yet there is a distinction. The formation of tissue materials from nutritive materials is indeed a sort of plastic process, but the latter term must be more strictly limited to express the setting forth of new elements, a formation of new cells. Growth itself includes two processes, which must be kept distinct one from the other. There is hypertrophy, an increase in size of the individual cells, and hyperplasia, a true new formation whether of cells or nuclei; the one belongs to trophic, the other to plastic processes.

But there is another group of processes, more nearly related to the plastic than to the nutritive, and yet not in a strict sense plastic, as no new elements are formed. This is what the author called metaplasia, the distinguishing mark of which is the persistence of the cells while the character of the tissue is changed. Although metaplasia is the basis of many important pathological processes, it is not pathological *per se*. We see it exemplified in the formation of the bony framework of the body. In order to a right comprehension of the subject it is necessary to distinguish between the two processes embraced by the term ossification. There is first the formation of the osseous tissue, ossification properly so called, and there is also the formation of the complete bone, a true organ, and this is correctly designated osteogenesis. As regards ossification, it is right to say that the bone is formed as a rule from cartilage and, at a later stage, also from periosteum. But in osteogenesis there is a further process, the formation of the marrow, called by the speaker medullification. The marrow was formerly regarded as a sort of exudation filling up the medullary canal and the spaces in the spongy portion of the bone. But when the living bone in its totality came to be studied, it was recognized that marrow is as true a tissue as the bone, the cartilage, or the periosteum. We find three principal forms of marrow, the red, the yellow, and the gelatinous. These three forms, however, represent different conditions of the same thing; hence the marrow is a changeable tissue and presents a striking example of metaplasia. But this tissue is not only metaplastic, it is also of metaplastic origin. The greater part of that which fills up the centre of a fully developed bone was formerly osseous tissue. This tissue gives up its lime-salts, and the bone-corpuscles become changed into marrow-cells, their constitution is altered and softened. If this process assumes an excessive character we call it osteoporosis, and in a still more advanced degree, osteomalacia. But this is not the only mode of origin of the marrow, for it may be formed directly from cartilage. This fact was first discovered by Virchow while studying the development of the bones forming the base of the skull. He found that only a small portion of that part of the sphenoid bone forming the clivus Blumenbachii, which is cartilaginous at birth, undergoes direct ossification. The greater portion is transformed directly into marrow. It was here also that the author was enabled to follow the process of metaplasia of the small, red marrow-cells into large fat-cells, the change of red into yellow marrow. The transition of cartilage into marrow-cells occurs in the same way as does that of bone into marrow, with this difference, however, that, while the marrow from osseous tissue is permanent, the same substance formed from cartilage shows a marked tendency to ossification. So striking is this tendency, indeed, that perhaps the majority of observers regard ossification from cartilage as a secondary act, the first part of the process being a medullification. This is not always the case, however, for an examination of lateral sections of the epiphyseal cartilage in normal osteogenesis shows beyond question that the process here consists in a direct ossification of the cartilaginous tissue.

The development of bone is thus shown to furnish a striking example of a manifold metaplasia. How little the simple nutritive standpoint serves to explain this metaplasia is well shown by the results of the studies

made of the formation of the spongy tissue during the last decade. These have shown that the number and the direction of the bony trabeculæ depend upon the pressure and traction forces working from without. The spongy tissue arises from a formation, not of the osseous trabeculæ, but of marrow which dissolves out the bone by a process of metaplasia in some places and, so to speak, spares it in others. The main part of the process consists in a medullification rather than in an ossification. These examples must have the effect of directing more attention than was formerly given to the metaplastic character of many processes, the exact significance of which can only be grasped by regarding them in this light. Without such an explanation, indeed, the etiology of these various processes may be understood in a general way, but beyond this we could not go. It is very important, for example, to know that syphilis may cause sclerosis of the long bones and also osteoporosis, but it is of still greater moment to recognize the fact that these two conditions may be but different stages of the same process.

These various metaplasias in osseous tissue are by no means of equal significance, and even the same form of metaplasia must be judged differently under differing circumstances. The secondary formation of marrow from compact bone substance forms in normal development the final stage of osteogenesis, and we may thus regard it as a progressive process. But in osteomalacia, on the other hand, in which medullification surpasses the normal limits, we derive the impression of a destructive and regressive process. Wherefore it follows that a prognostic judgment upon these metaplastic changes cannot be based upon a simple knowledge of these processes, but must rest upon a consideration of all the circumstances in which the organ is placed.

Professor Virchow then discussed the metaplasia of adipose tissue. The changes here are rather monotonous in character, the fatty being metamorphosed most frequently into mucous tissue, but the study of them is not without interest as bearing upon the formation of some forms of tumor. In this kind of metaplasia the fat is removed from the cells, but the cells remain and generate mucus. This, however, is not distinct from the cells; it is not, strictly speaking, secreted, but remains as an integral part of the tissue. The process is a return of the fatty tissue to the same tissue from which it is formed in embryonic development. It is not emaciation, for there is evidently a difference between simple atrophy of fatty tissue and the formation of mucous tissue by metaplasia. A lipoma may arise from adipose tissue by partial hyperplasia. Sometimes lipomata present numerous points of gelatinous formation, and there are even tumors growing from adipose tissue which are gelatinous throughout their whole extent. These tumors are called by Virchow myxomata. Since mucous tissue is normally embryonal, one might say in a certain sense that myxomata are composed of embryonic tissue; indeed that tumor, called by the author myxoma of the villi of the chorion, the hydatidiform mole, is wholly embryonal. But every myxoma is not of congenital origin, for besides the primary embryonal mucous tissue there is, as we have seen, a secondary tissue of this kind formed in adults by metaplasia, and from which myxomata are developed by hyperplasia. The author then spoke of tumors formed from nævi which may be said to be embryonal tissue, and of enchondromata arising from little islets of cartilage forgotten in the process of ossification, which are certainly of non-congenital origin. And he took occasion here to refute the theory of Cohnheim, who regards all tumors as originating from unchanged embryonic tissue.

Hitherto the argument had been confined to metaplasia between tissues of a similar character, but in concluding the author touched briefly upon that occurring in tissues belonging to different categories. He had never seen an instance of the formation of connective tissue from epithelial elements, but was convinced that the converse does obtain. He did not believe, as is maintained by some, that the white blood-corpuscles were capable of producing every form of new tissue, or, in other words, that they were possessed of the property of absolute metaplasia, but thought that their powers in this respect were limited.

Of course, so difficult a problem as the possibility of metaplasia in the sense of dissimilar tissue production cannot be regarded as solved because affirmed by even so high an authority as Professor Virchow. Indeed, the learned speaker himself disclaimed any such assumption, and expressed simply his gratification that he had been instrumental in directing the attention of investigators to this point, and he hoped that their labors would be simplified somewhat at the start by an acquaintance with the less complicated forms of metaplasia which they had just been considering.

WHAT IS THE CHOLERA MICROBE?

The nomenclature of bacteriology, as is always the case in every new science, is by no means satisfactory. The discoverer of each new form of micro-organic life has given it whatever name best suited his fancy, and while this was doubtless satisfactory to the word-coiner, it resulted in a confusion of terms sufficient to appal even the most stout-hearted tyro in bacterial studies. Cohn has done much by his classification to simplify the question, and although his system is by no means perfect, it has been adopted by most of the German writers, Koch among the rest. Yet the latter seems to have departed from this nomenclature in one notable instance at least, in the designation, namely, of the supposed cholera microbe. He has called it the comma-bacillus. The qualifying word "comma" was not happily chosen, for it suggests an organism of curved form with a head and a tapering extremity, whereas the cholera microbe is of equal size throughout with no distinction of its extremities. But more than this, as Koch himself says, the "bacillus" is probably not a bacillus at all, but rather a spirillum. Indeed, there are many points of close resemblance between the spirilla and the micro-organisms found in the dejections of cholera patients.

Dr. Mühlhäuser, of Speier, has recently made a study of spirilla, embodying his results in an interesting article appearing in *Virchow's Archiv*, No. 1, 1884. This organism he describes as existing in the form of a long, fine thread, twisted into a number of spiral turns. The spirals are of equal size and may vary in number from two

to ten or more. There is no appearance of head or tail, each end of the spiral thread being of equal thickness. These bodies are possessed of the power of independent motion, turning upon themselves like the screw of a propeller. The spirillum seems to be enclosed in a sheath, like the axis cylinder, which terminates at each extremity in a cilia-like prolongation. It is probably to these cilia that the body owes its power of motion. The spirilla grow by direct increase in length, adding coil upon coil until the number may reach a dozen or more. The larger the number of spirals the slower is the motion.

Spirilla are reproduced by fission, and never by the production of spores. And here begins the likeness between them and the so-called comma-bacilli. The latter, Koch insists, are never reproduced by spores, the parent microbe must be present and alive, otherwise no reproduction of organisms can occur. Another point of resemblance lies in the weak powers of resistance possessed by these organisms. Koch says that drying kills the cholera microbe with absolute certainty, and Mühlhäuser says the same of the spirillum. The latter is even killed by sunlight, but seems not to be injuriously affected by cold, and this fact is also affirmed of the cholera germ, which has been seen to revive even after having been frozen. Both these forms of micro-organisms depend upon oxygen for their existence, a peculiarity which separates them sharply from many other forms of bacterial life. Mühlhäuser saw in some fresh culture-fluids certain minute shapes which seemed to be straight and resembled the bacterium termo, but which he found on closer inspection to be bent, and to be spirilla of but two coils, thus resembling also in form the cholera germ. Another peculiarity of the spirilla was that they were sometimes joined together, end to end, like links of a chain. Koch also saw this union in the case of the cholera microbes, two being joined in the shape of an 'S,' or at times there were longer strings, looking like the spirals of a corkscrew. Of course, in this case the resemblance is only in outward form and may be apparent only, but the other points—the absence of spores, the slight power of resistance to outward influences, cold alone excepted, and their dependence upon oxygen for existence—would indicate a near relationship, even though they may not be members of the same family.

THYMOL IN THE TREATMENT OF CHOLERA.

Professor Bozzolo has written a letter to the public press in Italy, advocating thymol on theoretical grounds as a remedy for cholera. If it be true, he says, that cholera is due to the presence of micro-organisms in the intestinal canal; that these organisms are developed in this part because they find there an alkaline fluid favorable to their growth; and that acids kill them, or at least hinder their further development, then the problem is to find a slightly soluble acid, and strongly antiseptic substance which is, in large quantities, innocuous to the human organism, and which will pass into the intestines without suffering appreciable change in the stomach. These valuable properties, the learned professor maintains, are possessed by thymol. This substance may be given, he says, without danger, in the dose of three drachms a day, divided in capsules containing seven and a half grains each. Judging from the recent telegraphic reports of the ravages of the cholera in Italy, we are forced to conclude either that this remedy has not been tried to any great extent, or else that it has been proven ineffectual.

THE PREVALENCE OF TYPHOID FEVER IN NEW YORK.

Some statements have been made in the daily press to the effect that typhoid fever is prevailing more than usually in this city. Such is not the case, however, according to the latest reports. There is always some increase in the disease in the fall, and the mortality statistics show that the deaths therefrom are one-third greater in the last quarter of the year than in the first. During the past month of August the number of cases has been from 24 to 34 per week, and in the first week of September the number reported was 48.

The total number of cases in August was 140, while a year ago the number in the same month was 244. In September, 1883, the cases reached a total of 303 for the month, or 76 per week. So that typhoid fever now prevails a little more than in 1882, but it is much less than in 1883.

At the present time, with so many persons returning from the country, a certain proportion of the cases are probably imported. Then the settling again in a house whose drains and pipes have not been flushed for some time is a thing not always without danger. A timely caution from the family physician at present might be of much service.

THE BAD SANITARY CONDITIONS OF THE GREELY PARTY WHILE AT CAPE SABINE.

According to Dr. Green's report of the medical history of the survivors of the Lady Franklin expedition, published in last week's Record, it seems that this party spent their long winter night in a miserable hovel 25 feet long by 17 feet wide and 4 feet high, making the cubic air space 1,700 feet. In this the twenty-four members of the party lived all winter, having a cubic air allowance of about seventy feet for each man. "The whole party," it is said, "could barely squeeze in and lie at length, two or three being obliged to occupy the same sleeping bag." There were, it appears, certain vent-holes in the roof, which were sometimes stuffed with rags, and on one occasion the whole company came near perishing of asphyxia by the carbonic acid from an alcohol lamp which was burning in the hut while the vent-holes were stopped. Doubtless the sufferings and mortality of the party were augmented by the evil effects of bad air. It is well known that between four and five hundred cubic feet of air pass through the lungs daily, and in the same period about twenty-three cubic feet of oxygen are absorbed, and that the size of an apartment in which persons are confined should be such, that there shall not be less than eight hundred cubic feet for each person occupying the room. A multitude of instances illustrative of the fatal effects of neglect of this precaution are on record, the most notable of which is that of the "Black Hole of Calcutta," an account of which may be found in any text-book on physiology. The baneful results of imperfect hæmatosis from bad ventilation are familiar to all medical readers,

and it would appear, by analyzing the morbid phenomena presented by various members of the expedition, and so well described by Dr. Green, that the party when found were suffering almost as much from want of oxygen, and from accumulation of carbonic acid in their systems, as from deprivation of food. Add to this that they had long ceased to bathe themselves or take regular exercise (except perhaps Long and Brainard, who were the most healthy of the lot), and that they were extricated from appalling filth, and the wonder is that there were any survivors to tell the story.

MENSTRUATION IN WOMEN AND IN ANIMALS.

A HARVARD medical student, in the *Boston Medical and Surgical Journal*, August 28, 1884, has an interesting article on the phenomenon of menstruation in women and of heat in animals. According to this writer, "woman is more different from the man (*sic*) than the brute females are from their males, and the reproductive processes are intensified in her." In woman the menstrual period "is the period of absent sexual desire, and is by no means contemporaneous with ovulation." "The human intelligence has rendered woman sexually independent of the heat; sexual congress is permitted at any time, and therefore she is subject to a condition not prevalent in the brute animals; she is liable to conceive at any time." This writer goes on to observe that, in view of the possibility of pregnancy at any time, and the immediate demands upon her nutritive force which would come from such an event, "woman has to be *run* at a higher pressure (*sic*) than is necessary for the needs of the non-pregnant female." This lucid explanation is supplemented further on by the statement that, since the human female "is *run* at such high pressure, frequent overflows of nutritive material are necessary in the non-pregnant women, and these overflows take place at certain periods of genital hyperæmia inherited from the lower animals, that is, at the menses. That is to say, the reproductive side of menstruation is emphasized in woman, the sexual side in brutes."

Despite certain infelicities of style, the present status of the subject is fairly represented in the article. The ovulation theory is no longer tenable, as cases are on record of menstruation after double ovariotomy, of ovulation without menstruation, and of menstruation without ovulation. Instances of conception fifteen days or more after coitus are numerous. Stedman has reported a case where "a woman had menstruated regularly to the time of her death, but whose ovaries were found cystic and atrophied." It would seem then that there is very strong evidence against the ovaries being the source of the menstrual impulse, and the writer asks whether this impulse may not come from the general system. He points out the fact that fear, horror, and violent emotions, in general, are known to have an immediate effect on menstruation in many cases. "The influence of the mammæ is marked. Dr. Campbell cites two cases of premature menstruation in children caused by mammary inflammation." Change of climate often suppresses menstruation; a sea-voyage often delays or hastens the next period; anæmia is a most fruitful cause of amenorrhœa, and so, alienists have told us, is a mental disease. The writer takes up the recent theory propounded by Kindrat and Williams, and defended by Dr. Chadwick in a former number of the *North American Review*, that "menstruation is neither a congestion nor a species of erection, but a molecular disintegration of the mucous membrane of the uterus, followed by hemorrhage." In other words, the uterine mucus undergoes disintegration and exfoliates with each menstrual period; menstruation is then a sort of disappointed pregnancy. "When conception takes place a process of nine months or more of uterine increase is gone through, followed by fatty degeneration and desquamation in the puerperal state. When no conception, the process is completed in a little over a week." The observations of Moricke and Wyder seem to disprove this view; Moricke showed, by scraping with a curette the uterine mucous membrane of his menstruating patients, that there was no destruction, partial or total, of the mucous membrane, and no fatty degeneration; the bleeding, according to him, is due to diapedesis. Wyder, by a series of careful observations also arrived at the same conclusion, that in menstruation there is no denudation of the mucous membrane.

With respect to theories of menstruation this writer thinks that we are more badly off than we were ten years ago, when this physiological phenomenon was better explained than it can be to-day, in the light of all the facts.

News of the Week.

DR. VAN DER VEER, of Albany, gave a reception at his home in honor of Mr. Lawson Tait, of London.

IN MEMORY OF CIVIALE.—The municipal council of Paris has voted to give the name of Civiale to one of the streets in Paris.

A NEW EMERGENCY HOSPITAL FOR BELLEVUE is soon to be established in one of the down-town districts. This will relieve some of the work of the Chambers Street Hospital.

PARIS IS TO HAVE A BABY SHOW.—Artists and doctors are to be on the committee of judges, and healthfulness is to be considered as well as beauty in giving the awards.

CLAIMANTS TO PRIORITY IN THE DISCOVERY OF THE CHOLERA BACILLUS.—The number of these is increasing weekly. Besides the names of Dr. Bristowe and Professor Pacini, a Polish paper now claims the honor for Dr. Klodzianowski. The *Lancet* now brings up Dr. A. H. Hassall, who claims to have discovered the bacillus thirty years ago.

THE NEXT INTERNATIONAL MEDICAL CONGRESS.—Referring to its next place of meeting the *British Medical Journal* says: "We may be sure that our transatlantic cousins will leave nothing undone to make the next meeting as successful as the last two, if indeed they do not succeed in eclipsing former achievements; however this may be, the announcement will be received with great pleasure in this country, where we have learned to set a high value on the work done by the medical profession in the United States."

MEDICAL CHANGES IN BERLIN.—Owing in part to the appointment of Professor Schweninger as a member

of the Imperial Board of Health, the Director, Dr. Struck, has resigned. Dr. Koch has refused to be his successor, and has also withdrawn from the Board, being content with his position as Professor of Hygiene and Director of the Hygienic Institute. Dr. Julius Wolf has been made Extraordinary Professor of Surgery, and Dr. Mendel Extraordinary Professor of Psychiatry.

Ozone and Cholera.—During the cholera epidemic at Marseilles, ozone disappeared from the atmosphere. When it reappeared, after a southwest wind, the cholera mortality fell. It is not easy to produce ozone; there are many methods recommended, but they are all mostly worthless. M. Onimus only admits one method, electrifying the oxygen of the air either by a Ruhmkorff's induction machine and Berthelot's tubes, or by an ordinary electric machine; at the Pharo hospital M. Onimus adopted the latter method. The ozonoscopic papers testified that ozone was produced. Its actual therapeutic properties could not be determined, as the usual treatment was observed conjointly. The mortality was low in those wards where ozone was artificially produced.

The Elevation of a Quack.—It appears that Berlin medical circles are much disturbed over the elevation of Dr. Schweninger, Bismarck's Leibarzt, to a position in the Medical Faculty of the Berlin University. Schweninger had no scientific or even social standing amongst the profession previous to his success with Bismarck, and the correspondent of the *Allgemeiner Wiener Medicinische Zeitung* affirms that if he presented himself for admission to the Berlin Medical Society now he would be undoubtedly rejected.

Schweninger was formerly connected with the Munich Faculty, but was obliged to leave somewhat under a cloud. He is claimed to have advertised and applied a so-called "Schweninger-cure" for obesity, fatty heart, etc. This "cure," which he applied to Bismarck, is substantially that laid down by Professor Oertel in "Ziemssen's Handbuch der Therapie der Kreislaufstörungen, Feltherz," etc.

Despite the unpleasant pushing forward of the obnoxious quack, the Berlin medical journals are forced to keep very quiet, and it is only through Berlin correspondence that the true state of feeling is made known.

Death of Professor J. Cohnheim.—We regret to learn of the death of Professor J. Cohnheim, at the comparatively early age of forty-six. He died of gout complicated with some renal trouble. Professor Cohnheim was one of the most distinguished of the pupils of Virchow, whose assistant, in the Berlin Pathological Institute, he was from 1864 to 1868. In 1868 he was appointed ordinary Professor of Pathology at Kiel, and, in 1872 he preceded Waldeyer in a similar capacity at Breslau. It was there that he made his well-known researches on the changes produced by embolism, and on the escape of the white blood-corpuscles through the walls of the vessels in inflammation. In 1876 he succeeded Wagner in the chair of General Pathology and Pathological Anatomy in the University of Leipsic, and held that professorship up to the time of his death.

The Académie de Medecine of Paris continues its session through the summer. At its meeting on August 19th, the subject of cholera was discussed. M. Bouley read a paper for M. Chauveau on gangrenous septicæmia, in which it was shown that gangrenous septicæmia in man is identical with that in animals, and depends upon a *microbe aérobie*, which is probably only the septic vibrio of Pasteur.

A Place for Cholera to Locate.—One-fourth of the whole population of the State of New Jersey drink the water of the Passaic River, taken from a point where the tide, laden with the sewage of Newark's 140,000 people, flows up and meets the downward current bearing the sewage and factory refuse of 60,000 dwellers in Paterson and other cities on its banks a few miles above. The city of Passaic now proposes, says the *Sanitary Engineer*, to add its quota of sewage to the river by establishing a system of drainage. The water of the Passaic has been condemned as dangerous long ago. But in view of a prospective visit of cholera the matter becomes really serious and of interest to others than those living by the polluted river. The establishment of pumping works on the Passaic above all source of pollution is the remedial measure urged by our contemporary, and it is one that has been approved of by competent engineers.

Alleged Successful Inoculation of Lower Animals with Cholera.—A cablegram from London says that Drs. Reitsch and Ricati, of Marseilles, claim to have successfully inoculated lower animals with the cholera microbe. The animals died with choleraic symptoms. Remembering the great ease with which septic phenomena can be produced in certain lower animals, the reports of successful inoculations must be received with skepticism until full details are given.

The Paradise of Eclectics.—A writer in the *Kansas Medical Journal* grows enthusiastic over the present and future of Eclecticism in Kansas. The Eclectics in that State number nearly six hundred. "They do not," he says, "seek seclusion in rural districts generally, but occupy lucrative positions in cities and country towns, and in comparison with other industrial classes they are thrifty, diligent, have nice homes, pretty wives, sons, and daughters (so we think), wear good clothes, drive fine horses, own miles of prairie, bank stocks, meet the difficulties and enjoy the incidents that go to make up a busy, active life." The State Society has obtained a charter for a medical college.

The Canada Medical Association.—We learn from a correspondent that the annual meeting of this Association at Montreal, just previous to the meeting of the British Association, was unusually well attended and successful. We have received, too late for publication, the address of the president, Dr. M. Sullivan, of Kingston. It was a most able effort, and contained a great deal of solid statistical matter, as well as of practical suggestion regarding the medical affairs of Canada.

The Cholera.—The cholera has attacked Naples with a severity far surpassing that with which it visited Marseilles, or even Toulon. On September 8th there were eight hundred fresh cases and three hundred deaths within twenty-four hours. Some sixteen provinces of Italy have now been attacked. In most of these, however, the daily number of fresh cases is not large, varying from one or two to fifteen or thirty. The disease is spreading slowly in Spain, but is evidently dying out at

Toulon and Marseilles. The total number of deaths from cholera up to date is about six thousand, which means that there have, since June, been from twelve thousand to fifteen thousand cases of the disease.

Reviews and Notices.

Practical Manual of Diseases of Women and Uterine Therapeutics, for Students and Practitioners. By H. Macnaughton Jones, M.D., M.C.H., F.R.C.S. I. and E. Examiner in Obstetrics Royal University of Ireland, Fellow of the Academy of Medicine in Ireland, etc. New York: D. Appleton & Co. 1884. 12mo. pp. 392.

It is seldom that we see a book so completely fill its avowed mission as does the one before us. It is practical from beginning to end, and cannot fail to be appreciated by the readers for whom it is intended. The author's style is terse and perspicuous, and he has the enviable faculty of giving the learner a clear insight of his methods and reasons for treatment. Prepared for the practitioner, this little work deals only with his every-day wants in ordinary family practice. Every one is compelled to treat uterine disease who does any general business whatever, and should become acquainted with the minor operations thereto pertaining. The book before us covers this ground completely, and we have nothing to offer in the way of criticism. The illustrations of diseased conditions and of instruments are numerous and appropriate.

Diphtheria, Croup, Etc.; or, The Membranous Diseases: Their Nature, History, Causes, and Treatment; with a Review of the Prevailing Theories and Practice of the Medical Profession; also a Delineation of the New Chloral Hydrate Method of Treating the Same, its Superior Success, and its Title to be considered a Specific. By C. B. Galentin, M.D. Cleveland, O.: Printed at the Publishing House of the Evangelical Association. 1884.

The title of this book sufficiently indicates the object of the writer in giving it to the world. The author states that since 1875, when he first began to use chloral in the treatment of diphtheria, he has given it in over five hundred well-marked cases of the disease, with a mortality of less than two per cent. Prior to that time, when employing the ordinary treatment, he had encountered a mortality of from 25 to 33½ per cent. The chloral is given in small repeated doses with the object of inducing and maintaining a quiet somnolent state. A moderate hypnotic effect is, in the author's experience, essential to the best results, as at this point the temperature and pulse-rate are reduced, and worry, headache, and nausea disappear. This effect is also, he states, an indication that the remedy has been absorbed into the blood in sufficient quantity to produce upon it specific effects.

A Treatise on Ophthalmology for the General Practitioner. Illustrated. By Adolf Alt, M.D. Chicago, St. Louis, & Atlanta: J. H. Chambers & Co. 1884.

This book, as its title implies, is intended solely for the general practitioner. Its object, as stated in the preface, is to give the general practitioner a clear idea of the principles of ophthalmology, together with so much only of its practice as he might be reasonably justified in attempting. With this aim in view the author has succeeded in producing a really valuable work, one which may be perused with profit by the non-specialist, and which he will not be forced to lay aside because overburdened with details relating to subjects of little or no use to him. The work contains numerous illustrations which, though rather coarse in their execution, are yet sufficiently clear to answer the purpose intended. The book is neatly printed on good paper and will be found a valuable addition to the library of the general practitioner.

Fat and Blood: An Essay on the Treatment of Certain Forms of Neurasthenia and Hysteria. By S. Weir Mitchell, M.D. Third edition. Philadelphia: J. B. Lippincott & Co. 1884.

The author states in his preface that he has, in the present edition, rewritten parts of the book, and has added many practical hints, particularly with regard to the treatment of obesity and the use of milk. Dr. Mitchell's method of treating certain classes of nervous invalids is now well known and has received substantial endorsement on both sides of the Atlantic. For our part, we believe that the method advocated is an immense addition to therapeutics, and one whose value is yet not sufficiently appreciated. At the time, we are quite aware that the proper cases must be selected, and that treatment must be conducted with great care and judgment. The author wisely concludes his book with the expression of fear lest his method now be misused or misapplied.

Text-Book of Medical Jurisprudence and Toxicology. By John J. Reese, M.D., Professor of Medical Jurisprudence and Toxicology in the University of Pennsylvania, etc. Philadelphia: Blakiston, Son & Co. 1884. 12mo, pp. 597.

Professor Reese is so well known as a skilled medical jurist that his authorship of any work virtually guarantees the thoroughness and practical character of the latter. And such is the case in the book before us. A very extensive field is travelled over by one acquainted with all its parts, and all the main and essential landmarks are plainly pointed out to the reader. We might call these the essentials for the study of medical jurisprudence. The subject is skeletonized, condensed, and made thoroughly up to the wants of the general medical practitioner, and the requirements of prosecuting and defending attorneys. If any section deserves more distinction than any other as to intrinsic excellence, it is that on toxicology. This part of the book comprises the best outline of the subject in a given space that can be found anywhere. As a whole, the work is everything it promises and more, and considering its size, condensation, and practical character, it is by far the most useful one for ready reference that we have met with. It it well printed and neatly bound.

Medical German. A Manual Designed to Aid Physicians in their Intercourse with German Patients and in Reading Medical Works and Publications in the German Language. By Solomon Deutsch, A.M., Ph.D. New York: J. H. Vail & Co. 1884. Pp. 336.

The first division of this book contains an extensive collection of words and phrases that pertain to medicine in all its branches. The second division consists of conversations supposed to be held with a sick patient, and it seems to cover every imaginable morbid condition. There is a very complete German-English index appended.

The book is designed to meet the wants of physicians who are learning German, and who have to deal with German patients. In this respect it fills an unoccupied niche and will prove a most useful publication. It conflicts in no way with Cutter's Medical German Dictionary, which contains a very much more copious vocabulary. The book is well printed and neatly bound in flexible covers.

The Theory and Practice of Medicine. By Frederick T. Roberts, M.D., B.Sc., F.R.C.P. With Illustrations. Fifth American edition. Philadelphia: P. Blakiston, Son & Co. 1884. Pp. 1008.

This standard work has now reached its fifth edition, a sufficient endorsement of its excellence to make the reviewer feel that his task is a superfluous one. In the present edition the subjects of diseases of the nervous system and diseases of the skin have received especial

attention, and the chapters bearing thereon have been rearranged and to a large extent rewritten.

Perhaps the most conspicuous of the valuable features of the work is its comprehensiveness, the very large field that it covers within the single volume. If we were to make any criticism on the other hand, it would be that too much is attempted, and that the author fails to possess what might be called the medical perspective. That is to say, he does not assign his space in strict accordance with the relative importance of the subjects. The book, as a whole, is weak in its pathology.

Nevertheless it deservedly takes a high place among the standard treatises on the practice of medicine.

An Introduction to Pathology and Morbid Anatomy. By T. Henry Green, M.D., London. Fifth American from the sixth revised and enlarged English edition. With 150 Engravings. Philadelphia: Henry C. Lea's Son & Co. 1884.

The present edition of this standard work has been considerably revised. The introductory chapter on cells, and the etiology of disease, and the chapters on tumors, regenerations, septicæmia and pyæmia, and on vegetable parasites are entirely the work of Mr. Stanley Boyd. They are very well written and do the author credit. The chapter on vegetable parasites in particular is one of the best presentations of the subject which we have seen, though it does not differ greatly from that in Ziegler.

The chapters on tuberculosis and phthisis would bear rewriting in the light of modern mycology. Dr. Green's work is more elementary and less critical than Ziegler's.

It serves all the better, however, on this account, as a text-book for students.

Sexual Neurasthenia. Its Hygiene, Causes, Symptoms, and Treatment, with a Chapter on Diet for the Nervous. By George M. Beard, A.M., M.D. [Posthumous Manuscript.] Edited by A. D. Rockwell, A.M., M.D. New York: E. B. Treat. 1884. Pp. 270.

To those numerous readers of the late Dr. Beard's work who admired the charm and suggestiveness of his writings the present posthumous volume will be examined with great interest. It will be found that the chapters here given possess the same attractiveness which attached to all the author's writings, and he who begins to read will be slow to lay down the book before it is finished. The first two chapters comprise an introduction and a discussion of the nature and varieties of neurasthenia. In them Dr. Beard has stated clearly and succinctly his peculiar views regarding the nature of nervous exhaustion and its relation to the functions of the body. He applies here, also to functional nervous disturbances, the laws of evolution and devolution, or dissolution, using the same line of reasoning which Hughlings Jackson employed in a series of lectures delivered in London last winter.

These first two chapters are decidedly the best in the book, and furthermore, are among the best pieces of medical writing ever produced by an American physician.

The remaining chapters contain much that is true with some that is incorrect or commonplace. In practically working out his principles, Dr. Beard was sometimes hasty and superficial. His diet for the nervous is too fanciful, and his description of the evolution of the sexual sense amounts to little. His chapter on sexual hygiene is excellent and correct, but he states what is generally known and generally accepted.

The illustrative cases deserve attention. They are many of them most curious histories, and a perusal of them will give some idea of the peculiar class of cases which the author attracted to himself.

Though of a philosophic, and as many would say, an impractical mind, Dr. Beard was a successful therapeutist, having great resources and thorough confidence in himself. The chapter on treatment is instructive, therefore, but every physician of experience will appreciate that it was the man behind the therapeutical armamentarium which accomplished the work.

Dr. Beard's book betrays some signs of incompleteness, and doubtless it would have been added to, and changed if the author had been spared. As it is, however, it shows well both the faults and merits of the author. And not the least among the latter is the perfect cleanliness and absence of pruriency in the manner with which a delicate subject is treated.

Work and Worry, from a Medical Point of View. By W. Henry Kesteven, M.R.C.S., L.S.A. London: Diprose & Bateman, Lincoln's Inn Fields. 1884.

This is a very pleasantly written and suggestive essay on the evil effects of worry. By work the author means only that labor which is entered upon and carried through with heart and mind and soul. And all distasteful and unpleasant labor he relegates to the category of worry. Accepting such a definition of terms, we fear there are few men, however favorably circumstanced, who have not to undergo nearly as much worry as work in the course of a day. For no labor, however pleasant in the main, is throughout and entirely free from annoyances and disagreeable interjections. Nevertheless, we can do much, if we set our minds upon it, to make almost any kind of labor less unpleasant than it would otherwise be, and thus go far to convert our worry into work. The little brochure is quaintly printed and bound, and corresponds to its external dress to the style of the author.

Obituary.

PROFESSOR ROBERT E. ROGERS, M.D.,

PHILADELPHIA, PA.

Dr. Robert Empie Rogers, a prominent physician and a leading teacher of chemistry, of Philadelphia, died there on September 6th. He was born in Baltimore, Md., in 1814, and after a careful preliminary education he studied and was graduated as an M.D. from the University of Pennsylvania in 1836. From 1844 to 1852 he was Professor of Chemistry at that University, and assisted his brother, J. B. Rogers, in preparing his edition of "Turner's Chemistry," and on the death of that brother he succeeded him as Professor of Chemistry in the Medical Department of the University of Pennsylvania. In 1877 he resigned this position, and accepted a similar one in the Jefferson Medical College, in Philadelphia. He contributed to the *Journal of the Franklin Institute*, took part with his brothers in the geological surveys of Virginia and Pennsylvania, and edited the American reprint of "C. G. Lehman's Physiological Chemistry," 1855.

JACOB H. STEWART, M.D.,

ST. PAUL, MINN.

Dr. Jacob H. Stewart, a prominent physician of St. Paul, Minn., died of apoplexy, August 25th, ult., aged fifty-six years. He was educated at the Academy in Peekskill, N. Y., where his father, Dr. Philander H. Stewart, resided; he afterward entered Yale College, remaining there three years, and finally graduated at the University Medical College in 1851. In 1855 he settled in St. Paul, Minn.

In 1861, at the breaking our of the war, he went as surgeon of the First Minnesota Regiment. While attending the wounded on the Bull Run battle-field he was taken prisoner and confined in Richmond jail. Being paroled, he returned to St. Paul and became examiner for recruits. He was elected mayor of St. Paul in 1864 and again in 1869, 1871, and 1873. In 1876 he was elected to Congress, and in 1879 was appointed by President Hayes Surveyor-General of Minnesota. He leaves a widow and three children, one of whom, Dr. Jacob H., is at present perfecting his studies in this city.

Reports of Societies.

International Medical Congress.

EIGHTH SESSION.

Held at Copenhagen, Denmark, August 10–16, 1884.

REPORTS OF SECTIONS.

(Special Report for THE MEDICAL RECORD.)

SECTION ON MEDICINE.

MONDAY, AUGUST 11TH—FIRST DAY.

THE section was called to order by the Chairman, PROFESSOR F. TRIER, who briefly reviewed the forthcoming work of the members. He regretted the absence of Professor Grainger Stewart, and announced that the following gentlemen had been nominated as

HONORARY PRESIDENTS:

Drs. Bouchard and Jaccoud, of Paris; Lépine, of Lyons; Liebreich, of Berlin; Liebermeister, of Tübingen; Biermer, of Breslau; Pribram, of Prague; R. Bennett, of London; H. Acland, of Oxford; Austin Flint, of New York; Tommasi Crudeli, of Rome; and Rosenstein, of Leyden.

SECRETARIES:

Dr. Madsen, of Copenhagen, Secretary-General; and Drs. Leyfert, of Wurtzburg; Daremberg, of Mentone; I. Owen, of London, additional secretaries.

DR. S. LAACHE, of Christiania, then read a paper on

THE VALUE OF RECENT RESEARCHES ON BLOOD-CORPUSCLES IN THE PATHOLOGY OF ANÆMIC AND LEUCÆMIC DISEASES.

The speaker said that, owing to the labors of Vierordt, Welcker, Malassez, and Hayem, we were now in possession of a method by which the clinician was enabled to determine with tolerable exactness, not only the relative number of the blood-corpuscles, but also the pigmentary powers of the blood.

It has been determined that, in

ANÆMIA FOLLOWING HEMORRHAGE,

the number of red blood-corpuscles may be reduced below fifty per cent. without causing immediate death or rendering impossible a *restitutio ad integrum*. In the process of regeneration, the formation of new corpuscles proceeds more rapidly, as a rule, than does that of the hæmoglobin.

According to the condition of the red blood-globules, we recognize two forms of

CHLOROSIS.

In the first form, pseudochlorosis, there is but little, if any, change in the red corpuscles. In the second form, the true chlorosis, these bodies have undergone an undoubted, and often very marked, alteration. Here, not only the coloring properties of the blood, but also the number of the corpuscles are reduced, the former, however, in the greatest degree.

This division of chlorosis is of practical value, as it is in the second variety, true chlorosis, that iron exerts its well-known therapeutical action. In

PERNICIOUS ANÆMIA

the number of red globules may sink below 500,000 per cubic millimetre without causing immediate death or destroying all chances of recovery. A peculiarity in this disease is, that the red corpuscles are on an average larger and contain more hæmoglobin than normal.

While the relations of the white blood-corpuscles in the above conditions are not constant, their increase in number is the predominating symptom in

LEUCÆMIA.

Their size, however, is variable. The red corpuscles may not be altered, even in advanced stages of the disease, and the decrease in number, even when it occurs, never reaches such an extreme degree in the three first-mentioned affections. Arsenic exerts a destructive action upon the white globules.

SIR RISDEN BENNETT, of London, took the Chair while PROFESSOR AUSTIN FLINT, of New York, read a paper on

A UNIFORM NOMENCLATURE OF AUSCULTATORY SOUNDS IN THE DIAGNOSIS OF DISEASES OF THE CHEST.

At the meeting of the International Medical Congress, in London, in August, 1881, the following resolution was adopted by the Section on Medicine:

"*Resolved*, That a Committee be appointed to report on a uniform nomenclature of auscultatory sounds in the diagnosis of diseases of the chest."

The following were appointed members of this Committee; Professors Austin Flint, of New York; Ewald, of Berlin; D'Espine, of Geneva; and Drs. Douglas Powel and F. A. Mahomed, of London.

At a meeting of the Committee, in London, it was agreed that each member should send his report to the Chairman, who would compare them and submit the results of such comparison to the Section on Medicine, at the meeting of the Congress in Copenhagen. Dr. Flint placed a

COMPARATIVE TABLE OF THE DIFFERENT LISTS

where it could be seen by the members, and then presented his report upon the points of difference and agreement in these several lists. An approach to uniformity was noticed in them all. The Committee had evidently not needlessly multiplied terms. Those signs which were not included in all lists were unimportant, with the exception of cavernous respiration, which was wanting in the German. There were no essential points of difference in the nomenclature. The term subcrepitant râles was wanting in all the lists, and was, the speaker thought, superfluous. No variation existed in the definition of palpation sounds, but there were some differences in the definition of the percussion sounds. In the American list it was stated that prolonged expiration may be high or low in pitch; the high pitch indicated consolidation. Râles in the French nomenclature mean either dry or moist sounds; in the English, only moist. The definition of bronchophony and pectoriloquy varies in the different lists.

It was suggested by the speaker that the report be considered a provisional one, and that representatives of other countries be added to the Committee, to report at the next meeting of the Congress.

THE PRESIDENT returned thanks for the report, and expressed his approval of the principles upon which it was drawn up.

The suggestion of Dr. Flint as to the provisional nature of the report was submitted to the meeting and adopted.

Several of the members criticised the report, as regarded some of its features.

DR. FLINT replied that the report was only intended to be a provisional one.

PROFESSOR TOMMASI CRUDELI, of Rome, then read a paper on

MALARIOUS INFECTION IN MAN.

The human organism presents different degrees of resistance to the action of the malarial poison. Sometimes this is of very high degree. It may often be hereditary in nations, appearing to be the effect of natural selection. In our day, however, this happy selection is impossible, at least among civilized races, and has been replaced by specific degeneration of the inhabitants of malarious countries. We may, however, oppose this tendency to degeneration from the effects of the malarial poison by means of a simple and inexpensive prophylactic medication.

The specific ferment of malaria attacks directly the

red blood-corpuscles, and causes necrobiosis as the final result of a series of alterations in the protoplasm of the cells. These changes are characteristic and pathognomonic as a sign of infection.

Dr. A. Goldschmidt, of Lyngby, Denmark, exhibited a chart showing the progress of

MALARIAL EPIDEMICS IN DENMARK.

He related briefly the history of these epidemics and showed their close connection with floods due to irruption of the sea, or to excessive rainfall.

Dr. Kering, of St. Petersburg, presented a communication on

CEREBRO-SPINAL MENINGITIS.

He described the etiology, pathology, and symptoms of the disease. The section on treatment contained no very novel suggestions.

Tuesday, August 12th—Second Day.

The Section was called to order by Dr. Bouchard, of Paris, who occupied the chair.

Professor Ewald, of Berlin, read a paper on the

GENERAL MANAGEMENT OF TUBERCULOSIS AS INFLUENCED BY RECENT INVESTIGATIONS IN EXPERIMENTAL PATHOLOGY.

The author reviewed briefly the subject of the tubercle bacillus, and then showed how the theories of Koch and his followers had influenced the teachings on etiology, diagnosis, prognosis, and treatment.

Dr. J. Grancher, of Paris, then followed with a communication entitled

THE EARLY DIAGNOSIS OF PULMONARY TUBERCULOSIS.

In the pneumonic form of pulmonary tuberculosis, and in that form which begins with hæmoptysis, or with a violent cough, the presence of the tubercle bacillus is an all-sufficient diagnostic sign. But in that more common form, in which the commencement is very insidious and unaccompanied with expectoration or cough, the bacilli cannot be detected. They can only be found after expectoration has begun, and then the diagnosis is certain enough without this additional proof.

The most conclusive sign in this early stage is a slight roughening with lowering of tone of the inspiratory murmur. This inspiratory abnormality is sufficient for a probable diagnosis when it is distinct, permanent, and localized at the apex of the lung, and when the patient is scrofulous or presents an hereditary or other predisposition to tuberculosis. This change in the sub-clavicular inspiratory sound is found more frequently on the left than on the right side. It is true, however, that very slight causes may produce this alteration in the vesicular murmur, a transitory congestion at the menstrual period, for example. Hence it is not well to rely upon it too strongly unless it is permanent, and unless an increased probability is furnished by the general condition of the patient.

Dr. Quinlan, of Dublin, presented a note on the

TREATMENT OF PULMONARY CONSUMPTION.

The Library of the Royal Irish Academy, in Dublin, contains a large number of manuscripts in the Celtic language, treating upon medical subjects. In these, mention is frequently made of the mullein plant as a remedy in pulmonary diseases. And at the present day it is largely employed by the Irish in consumption. The plant is known to botanists as the

VERBASCUM THAPSUS.

The author had made a number of experiments to determine its efficacy, and concluded that it possessed considerable value. It is given in infusion in milk, and the leaves are smoked for the relief of cough.

Dr. R. Shingleton Smith, of Bristol, read a short communication on

IODOFORM IN THE TREATMENT OF PHTHISIS.

The drug had acted well in his hands in reducing temperature, and improving the general condition of the patients.

Dr. Jaccoud, of Paris, concluded the discussion of pulmonary phthisis with a paper on the

TREATMENT OF TUBERCULOSIS AS INFLUENCED BY KOCH'S THEORY.

He maintained that the discovery of the bacillus tuberculosis has been singularly sterile in its effects upon the treatment of phthisis. He also insisted, in regard to prophylaxis, that precautionary measures against infection had been taken long ago. The main point to be held in view was to maintain the health of the upper part of the lung, and so to render it proof against infection. The good effects of high altitudes were due to the fresh air and means of exercise. He had himself pointed out the freedom of such localities from micro-organisms in the air. As to Koch's theory, he was of the opinion that it had great nosological interest, but that it was of no value in a therapeutic sense. Possibly in the future the discoveries of M. Pasteur may come to be of some prophylactic importance.

At the afternoon session Professor Austin Flint occupied the chair.

Dr. W. B. Hadden, of London, read a paper on

MYXŒDEMA AND ITS PATHOLOGY.

This is a disease characterized by a general swollen condition of the body resembling dropsy, except that the parts do not pit on pressure. The general expression of the sufferers is placid and inert—in a word, cretinoid. The skin is dry and harsh, perspiration and sebaceous secretion are absent, and the hair, nails, and teeth share in the general malnutrition. There is wasting of the thyroid gland. The temperature is almost constantly subnormal. The speech is slow, thick, and nasal, and the tongue seems too large for the mouth. An indisposition to all mental and bodily activity is one of the most striking features of the disease. The appetite is poor, deglutition is often difficult, and defecation seems to be hindered by a swollen condition of the rectal mucous membrane.

The disease usually attacks adult women, but it may possibly commence during adolescence. It occurs among rich and poor, and climate and race seem to be without influence.

As to morbid anatomy, there is always a diminution in size of the thyroid gland. According to Ord there is solid œdema of the connective tissues, and a great increase in the amount of mucin; hence the name myxœdema. The author believed that the disease is dependent upon changes in the sympathetic nervous system, and he thought it not unlikely that the thyroid is in some relation with the peripheral sympathetic nerve-fibres. This view, he stated, had recently been borne out by post-mortem evidence.

An improvement has occasionally followed the employment of jaborandi.

Professor Brandes, of Copenhagen, then exhibited

A LIVING SPECIMEN OF MYXŒDEMA.

The woman was forty years old and had suffered from the disease for eleven years. The symptoms began with loss of power in the right hand, followed by a melancholy sluggishness of the intellect. The urine had contained but very little albumen.

Sir William Gull said he had published a paper on

CRETINISM IN ADULTS

eleven years ago. This was what is now called myxœdema, but it is not a new disease. It is merely sporadic

cretinism in the adult. Cretinism comes on at any period of life and in any degree, and is often not recognized by the physician.

Dr. Ord, he continued, looking on it as a special disease, looked for a special pathology and termed it myxœdema. The myxœdema in such cases is accidental, not the essence of the disease.

Dr. Mahomed said that Sir W. Gull's earliest observations were remarkably confirmed by our latest knowledge of the disease. All the truth about it, however, was not contained in his remarks. Is the disease a permanent one? He thought it was not necessarily. In some cases it is not general, but confined to some local portions of the body. The disease is a perverted nutrition, not necessarily a permanent perversion.

Many cases have been seen to improve under treatment; one case, under the speaker's own observation, dated from two years back. At first there was no albumen, but later the urine was highly albuminous. The patient disappeared for a time, but a few weeks ago applied for admission. At this time the myxœdema and cretinism had quite disappeared. There was no albumen in the urine, but the patient had ascites and general dropsy. The abdomen was tapped, the patient had epileptiform convulsions and died in three days. At the autopsy there was found a thickening of the capsule of the liver; the kidneys were not granular, and there was no myxœdema of the tissues. The disease had evidently disappeared.

He related a second case, which was under the care of Dr. Goodhart some years ago. The patient came into the hospital lately and died there. She was a withered old woman, but presented no trace of myxœdema. The occurrence of mucin in the tissues, he continued, is probably accidental, as Sir W. Gull says, and is the result merely of œdema, as is often seen in œdema from venous obstruction, in which he had often seen similar brawny swelling. It is safe to say in such a disease there is an affection of the nervous system, but this is probably secondary, not primary. The sympathetic system is probably at fault. He confessed he would not quite like to see the explanation in simple cretinism or in disease of the thyroid gland.

A number of the members then participated in a

DISCUSSION ON TUBERCULOSIS.

Among those who spoke were Professors Paul Guttman, of Berlin, A. Pribram, of Prague, and Dr. Croig, of Brussels. The discussion elicited nothing of any special interest.

The following day, Wednesday, August 13th, was devoted to excursions around Copenhagen, and there was consequently no work in the Sections.

THURSDAY, AUGUST 14TH—FOURTH DAY.

Dr. Biermer, of Breslau, presided at the opening session.

The first paper of the day was read by Professor R. Lépine, of Lyons, and was entitled

CLINICAL OBSERVATIONS ON SOME AUTO-INTOXICATIONS.

The different forms of self-poisoning were grouped by the author under the following heads:

1. Auto-intoxication in diabetics, diabetic coma. Allied to this is the form of poisoning sometimes seen in patients suffering from cancer of the stomach.

2. Auto-intoxication of intestinal origin, intestinal septicæmia. This may occur in strangulated hernia, artificial anus, and in various other intestinal lesions, even where there is no obstruction in the gut.

3. Auto-intoxication of bronchial or vesical origin.

4. Auto-intoxication as the morbid element in acute infectious diseases.

The author then spoke briefly of the diagnosis of these different forms of self-poisoning, and set down the rules for their hygienic and therapeutical management.

The views advanced in the paper were criticised by Professor Stadelmann, of Königsberg, and Edefsin, of Kiel.

A communication was then presented by Professor Liebermeister, of Tübingen, entitled the

ANTIPYRETIC TREATMENT OF ACUTE INFECTIOUS DISEASES.

He said that a great danger in fevers arose from the elevated temperature, and it was the problem for the physician to reduce the pyrexia. The basis of antipyretic treatment is the direct withdrawal of heat by cooling baths. In many cases, however, the exhibition of antipyretic drugs is a useful auxiliary.

Professor Bouchard, of Paris, followed with a paper on the

ANTISEPTIC TREATMENT OF INFECTIOUS DISEASES.

The paper was a presentment of the views of Dr. Warfvinge, of Stockholm. He showed that the high temperature is not the essence of the disease, but is only an important symptom, and consequently is not the main point for attack in treatment. It is impossible to obtain a reduction of temperature by cold baths except by repeating them with great frequency. It is more rational to employ internal remedies, which at the same time reduce the temperature and repress the production of heat. It is most probable that all infectious diseases are due to the presence of inferior organisms within the economy. It is therefore more rational to attack them as the cause, rather than the fever as a symptom. But it is known that the so-called antipyretics are also among our most powerful antiseptics, and this probably explains their mode of action. Although any possible concentration of a drug within the body is too weak to kill these organisms, it is probably strong enough to so paralyze them that they become incapable of exerting their deleterious effects. The system thus gains time to recuperate, and finally becomes strong enough to expel the already weakened micro-organisms.

The writer then gave a résumé of Dr. Warfvinge's experiments with various antiseptics in fevers. He regarded phenic acid in the treatment of typhoid fever with especial favor. Alum he had found of great service in the treatment of pertussis.

At the afternoon session, Professor Lépine, of Lyons, occupied the chair.

The greater part of the session was occupied by a

DISCUSSION ON COLD BATHS IN FEVERS,

as advocated in Professor Liebermeister's paper. Some of the speakers animadverted very strongly on the dangers of this method, and expressed a decided preference for the employment of internal antipyretics.

Dr. Pribram, of Prague, spoke of the value of

ANTIPYRIN.

This was a new remedy, but the results of a number of experiments by different observers would seem to show that we possess in this artificially formed substance, an antipyretic of undoubted worth.

Professor Liebermeister replied briefly to the criticisms of the cold water treatment, and defended with some spirit its claims as the best method for reducing temperature in fevers.

Dr. Brondet, of Paris, read a paper on the

TREATMENT OF INTESTINAL OBSTRUCTIONS BY ELECTRICITY.

He detailed the methods employed by him, and illustrated his remarks by a number of cases happily relieved by this treatment.

FRIDAY, AUGUST 15TH—FIFTH DAY.

DR. PRIBRAM, of Prague, was in the chair.

PROFESSOR ROSENSTEIN, of Leyden, presented a paper on

MALARIOUS INFECTION IN MAN.

This was followed by an interesting paper by PROFESSOR WITH, of Copenhagen, on

PERITONITIS RESULTING FROM DISEASES OF THE VERMIFORM APPENDIX.

The author said that inflammation of the peritoneum in the right iliac fossa, known by the name of perityphlitis, originates most frequently from ulceration and perforation of the appendix vermiformis. Peritonitis of such an origin is called appendicular peritonitis. It presents itself under three usually distinct forms or stages, to wit, adhesive, local, and general appendicular peritonitis. The first occurs prior to perforation, and the last subsequent to this accident.

As regards treatment, the primary indication is to prevent, as far as possible, all movements of the intestine. With this object in view, it is necessary to give sufficiently large doses of opium or morphine, and also to abstain from the use of laxatives or enemata. The bowels must be kept confined for many days, sometimes as many as twenty-four. If this treatment be pursued, the necessity for surgical intervention will be greatly restricted.

PROFESSOR AUSTIN FLINT, of New York, desired to refer to a point in the diagnosis of perforation of the intestine, viz.,

THE PERSISTENCE OF THE HEPATIC DULNESS ON PERCUSSION,

as a proof that perforation has not taken place. A very small quantity of air in the peritoneal cavity sufficed to abolish hepatic dulness. This might be proved by injecting air through a trocar in the dead subject. A tympanitic resonance over the whole hepatic region was not proof, however, that perforation had taken place, for when the colon is distended, a tympanitic resonance often extends up to the base of the lung. Another point as to the

TREATMENT WITH OPIUM,

and allowing the bowels to remain constipated for a long time, unless they acted spontaneously. This was long ago introduced and practised in New York by Dr. Alonzo Clark, who ascertained that patients could tolerate an enormous amount of this drug. The dose should be gradually increased so as to avoid a toxical degree of narcotism. The rationale of the treatment was complete arrest of peristaltic action, to "put the bowels in splints." Although cathartics or laxatives were dangerous, the rectum might sometimes be emptied by a simple enema, which did not excite the intestine above a peristaltic action.

The paper was further discussed by DRS. EWALD, of Berlin, and MAHOMED, of London.

DR. J. GRANCHER, of Paris, followed with a communication on

SUBACUTE PNEUMONIA.

Subacute inflammation of the lung, so-called splenopneumonia, has no well-defined position in pathological classification. It is confounded now with pulmonary congestion, and again with the pleurisy which often accompanies it as a complication. It differs, however, from acute congestion and passive stasis as much as from acute pneumonia and pleurisy. More nearly allied to broncho-pneumonia, it is yet easily distinguished from it by its localization in one lung, its fixedness, as well as the general character of its clinical features. The mode of origin, the pain in the side, dyspnœa, fever, and dry cough are symptoms which resemble more or less those of pleurisy of medium intensity. But the dyspnœa is more intense and the fever more active and showing greater oscillations. The general condition is more grave than it is in pleurisy. Finally, there is often albumen in the urine. The disease lasts about five or six weeks.

The physical signs over the seat of disease are dulness, absence or diminution of vocal resonance, a soft souffle, broncho-ægophony, and some crepitant râles on inspiration. The signs in the neighborhood of the pulmonary lesion are: below the point and to the left, the preservation of Traube's space; on the right, the persistence of the liver in its physiological position. Above this point, in the sub-clavicular and scapular regions, there is a noticeable enfeeblement of the inspiratory murmur, with tympanism and a permanent or transitory exaggeration of the vocal vibrations. The opposite lung is healthy.

In subacute pneumonia, pure and simple, puncture of the chest-walls with the needle of the hypodermic syringe gives exit only to air and blood. This sign is not, however, always of practical value, as there is often a more or less extensive pleuritic effusion.

On Friday morning, from 10 to 12 o'clock, PROFESSOR TOMMASI CRUDELI gave a demonstration at the School of Technology of microscopic specimens showing the

CHANGES IN THE RED BLOOD-CORPUSCLES IN MALARIA

in the human subject. In each preparation the healthy corpuscles were unstained, but in various parts of the field could be seen other corpuscles containing one or more small colored particles. These particles, he thought, were probably the germs of a bacillus.

SATURDAY, AUGUST 16TH—SIXTH DAY.

There was but one session this day. The principal paper was by PROFESSOR GRAINGER STEWART, of Edinburgh, on the

INFLUENCE OF ACUTE INFECTIOUS DISEASES UPON THE KIDNEYS AND THEIR FUNCTIONS.

The author said that acute infectious diseases were now believed to be due to the introduction into the system of poisonous matters which are capable, under favorable circumstances, of reproducing themselves. These diseases influence the kidneys in two ways: by producing organic, and hence grave and permanent, or functional changes. In considering the

ORGANIC CHANGES

he first described the anatomical alterations. The tubules might be normal in appearance, but were more usually the seat of lesions varying from a slight cloudy swelling of the epithelium to the most pronounced inflammation, with fatty degeneration and breaking down of the cells. In some cases the tubules contained numerous parasitic organisms. In the Malpighian corpuscles the vascular tufts were compressed by swelling of surrounding parts. In some cases there was marked proliferation of the fibrous tissue of the stroma. The next question was:

WHAT IS THE RELATION OF GERMS TO THESE CHANGES?

It is certain that micro-organisms may be found in great numbers in the kidneys in certain of the acute infectious diseases, yet the author himself was convinced, from examinations that he had made in conjunction with Dr. Stacey Wilson, that fatal diphtheria with albuminuria was not necessarily attended with the presence of organisms in the kidney. He was also convinced that well-marked scarlatinal nephritis might run its course without any organisms being present. It seems most probable that a poisonous substance is developed in the course of the disease by which the kidney is irritated.

The third question was:

DO THE INFECTIOUS PROCESSES DIFFER CLINICALLY FROM ORDINARY NON-INFECTIOUS RENAL INFLAMMATION?

The ordinary symptoms are the same, but, strange to say, there appeared to be no room for doubt that virulent organisms were often present in the urine of patients suffering from acute infectious diseases. The author was unable to explain the fact, and thought it might lead to a reopening of the question of micro-organisms in the kidneys, and possibly overthrow the opinions just enunciated by him.

He next considered the question of

FUNCTIONAL ALBUMINURIA,

occurring in the course of acute infectious diseases. This might result from slight changes in the renal structures which speedily subsided, and were consequently never the subject of post-mortem examination. In other cases it was the result of high temperature with transudation of albuminous materials through the renal vessels. Lastly, in some cases it might be due to an alteration of the blood serum from chemical causes, by reason of which transudation through the vessels occurred more readily than in health.

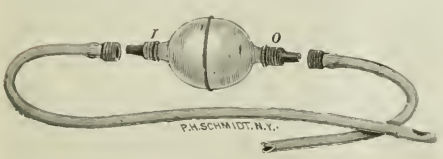
The Section then adjourned at 1 o'clock.

New Instruments.

A SIMPLE STOMACH-PUMP.

By D. H. GOODWILLIE, M.D.,

NEW YORK.



THE accompanying cut represents a simple and efficient pump for the removal of blood and mucus from the stomach, to prevent vomiting, after operations on the nose and mouth, particularly that of staphylorraphy. It can also be readily used in the bladder or rectum. It consists of a heavy rubber ball of two-ounce capacity, having an in-valve (I) and an out-valve (O). To this is attached by a simple hard rubber connection the stomach, bladder, or rectum tube, of flexible rubber, of different sizes for children or adults. The tube at the other end to be placed in the vessel of liquid.

When it is to be used, pass the disconnected stomach tube into the stomach. Fill the connected ball and other tube from the vessel, keep it upright, with the tube downward, connect it to the stomach-tube, and gently force the required quantity of liquid into the stomach. Then disjoint the tubes, reverse the ball, rejoin tubes, and gently pump out. Repeat if necessary.

Its advantages are, that it is simple in structure, has extra large valves, good strength, is always ready, and easily used.

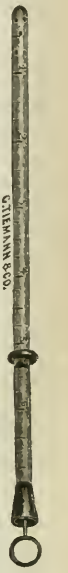
THE RECORD NOT BEATEN AFTER ALL.—Dr. L. A. Rodenstein, of this city, sends a note calling attention to a case reported by him in the *American Journal of Obstetrics*. It was that of a polycystic ovarian tumor weighing one hundred and forty-six pounds. "So," writes our correspondent, "Dr. C. C. Stockard's case, published in THE RECORD of August 16th, is not the largest on record, and New York still holds the champion cup, as far as large tumors are concerned."

A NEW SOFT RUBBER VELVET-EYED TUBE FOR INJECTING OR MEASURING THE UTERUS.

By W. THORNTON PARKER, M.D.,

ACTING ASSISTANT SURGEON, U. S. ARMY.

CONSIDERABLE attention has been given of late to the subject of intra-uterine injections. The necessity for the accurate measurement of the uterus in a great many gynecological cases requires a *safe* instrument. All writers on diseases of women recognize the dangers in the use of the metallic sound.



In too many instances the sound is needlessly used, and often by rough and unskilful operators.

It is impossible to estimate the injury resulting from such meddling.

"The employment of the uterine sound should be resorted to with great care and gentleness, and only when we are likely to gain some information from its use that we cannot otherwise gain. Several instances have been recorded where the point has been made to perforate the wall of the uterus. This accident is most likely to happen when the organ is in a softened state, such as occurs during the fatty degeneration of sub-involution following abortion or parturition, or in the ulcerative stage of cancer. It has been suggested that the point may have passed along a dilated Fallopian tube, but although this may explain some few cases where the point of the sound has been felt beneath the abdominal wall, there is *little doubt* but that in the *majority* of *such cases perforation* of the *uterine wall has actually occurred*."[1]

"*If* the *uterus* be in its *normal position*, and the *sound* be *used* by a *skilful hand*, the operation is not *difficult*. *But* it is *not* the *healthy* uterus which we are generally called upon to explore. If the organ be displaced, the difficulties and dangers attending the employment of the sound are considerable. The facts which may be ascertained by the sound are these: 1, the capacity of the uterus; 2, the existence of growths within it; 3, deviation of the course of its canal; 4, differentiation of displacements from uterine tumors; 5, the mobility of the uterus."[2]

The great importance of these facts with reference to diagnosis is evident, and one would suppose that an instrument revealing so much would be universally employed. Such, however, is not by any means the case. By adepts it is commonly resorted to, but in general practice will be found many, indeed a majority, who do not employ it *from fear of its results*, the difficulty of its introduction, and uncertainty as to its revelations.

"Some remarkable accidents prove the necessity of exerting the utmost care and delicacy of touch in using the sound. The point of the instrument has actually perforated the fundus of the uterus. Two such cases were observed by Schroeder. In both the sound went without force sixteen to seventeen centimetres deep, and its knob was felt through the thin abdominal walls. The most careful and judicious use of the sound is sometimes *attended* and *followed* by *intense pain*. Metritis has occurred, and this even when there was no reason to infer that the wall had been perforated. That *fatal accidents have occurred* from *the use* of *the sound can hardly* be *doubtful*."[3]

It has occurred to me that some improvement is required in our instruments for intra-uterine injection, and also that some gentler if not more precise method might be employed in measuring the uterus than that of the metal sound. The accompanying very simple contrivance has been devised, which may be found useful in the operations for which it is intended.

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[1] Edis: Diseases of Women, p. 11 1881.
[2] Thomas: Diseases of Women, p. 100. Fifth Edition, 1880.
[3] Barnes: Diseases of Women, p. 142 et seq.

This uterine injecting and measuring tube is made of pliable rubber somewhat stiffer than the rubber catheter. It corresponds in diameter to the No. 13 Tiemann & Co's American Scale, although it can be used larger or smaller in diameter if desired. It is ten inches long, and fits securely, when needed for injecting purposes, over the nozzle of the common hard rubber uterine syringe. For about six inches it is marked with one-eighth, one-fourth, one-half, and one inch divisions. There is no terminal orifice, but there are twelve "velvet-eyed" apertures to permit the escape of the fluid for injection *obliquely backward*. The tube can be easily and painlessly introduced into the uterus, and by slipping the black hard rubber ring forward against the *os*, the length of the uterine canal can be accurately determined. The tube being flexible, and the orifices "velvet-eyed," the danger from injury to the uterus is reduced to the minimum. The wire provided for use, when used as a *measurer*, will be found sufficiently stiff to make the instrument a very acceptable sound. If this measuring tube can sometimes be substituted for the more dangerous metallic sound, and with equal accuracy, the object of its manufacture will have been accomplished.

FORT UNION, NEW MEX.

A NEW SPRAY PRODUCER.

BY CYRUS EDSON, M.D.,

NEW YORK.

THE instrument represented by the accompanying illustration is a modification of the ordinary nasal application, and has been designed for making medicinal applications to the mucous surfaces of the nares, pharynx, and larynx. It consists of a hard rubber tube, about five inches long, having an oblong bulbous extremity, divided near its proximal end by a thread and screw joint.

To use the instrument the bulb is unscrewed and packed with absorbent cotton or sponge, which is then saturated with the chosen solution. The bulb having been screwed in place, the instrument is attached to a compressed air-receiver and used like a Sass' tube.

The spray is somewhat coarser than that produced by the latter atomizer. A tip is provided for delivering it in any direction.

To the practitioner who is not a throat specialist it commends itself for the following reasons: It is practically indestructible; it is not liable to become clogged; it does not require specially constructed bottles for the medicinal solutions. It is an excellent powder blower.

GLASS IN PEPSIN PACKAGES.—Dr. S. E. Campbell, of South Bay City, Mich., sends us a note of warning to physicians who dispense their own pepsin. A medical student suffering from gastric insufficiency (we have never met with that trouble in medical students, by the way) purchased a pound package of saccharated pepsin made by a New York firm. In taking his dose he noticed occasionally something hard in his mouth. Finally he sifted the pepsin and found a number of bits of broken test-tube. We presume that the mixture is not a common one, but a word of warning is not out of place.

Correspondence.

INTERNATIONAL MEDICAL CONGRESS NOTES.

(From our Own Correspondent.)

COPENHAGEN, DENMARK, August 23, 1884.

THE OPENING ON SUNDAY—THE EXCURSION IN THE MIDDLE OF THE WEEK—PROFESSOR LANGE, THE SECRETARY-GENERAL—HOW HE USED HIS OFFICIAL POSITION IN HINDERING THE PRESS IN OBTAINING LEGITIMATE INFORMATION — THE SECRETARIES OF SECTIONS IN THE RÔLE OF OBSTRUCTIONISTS—DIFFICULTIES IN OBTAINING INFORMATION GENERALLY—THE BANQUET IN THE TENT AND THE NOVEL WAY OF RESPONDING TO TOASTS—BRILLIANT RECEPTIONS AND FREE LUNCHES.

IN my previous letter, hastily written before the closing of the mail, I endeavored to give a general idea of the great medical meeting here, but I found on looking over my notes that there are many things which I might have said but for the hurry.

The choosing of Sunday as the day for the opening ceremony was not much in accordance with American or British notions, but I suppose it did not seem *outré* to Continentals. It certainly would not have been done in America or England. The singing of a cantata after the speeches and before the Congress was declared open had a novel but very pleasing effect.

On the whole, those who attended the recent Congress have no reason to complain of the Danes. Judging of them by the Congress week, one cannot but pronounce them a most hospitable nation. Receptions, banquets, excursions followed one another in rapid succession, alternating with the more serious work of the Congress. The idea of giving up a whole day to excursions in the middle of the week was certainly somewhat novel, but the result was most enjoyable.

Professor Lange, the Secretary-General, made a speech at the opening ceremony. He was very nervous, and spoke so low that no one more than a few yards from him could hear a word he said, and altogether made rather a poor impression as an orator. Before leaving Professor Lange I desire to place on record that, in his official capacity of secretary, instead of affording facilities to representatives of the press he either would not or could not give them any assistance, but apparently endeavored to obstruct them. He speaks English fluently, so he cannot plead as an excuse that he did not understand the English-speaking journalists who applied to him. Several of the secretaries of sections also were very loth to communicate what they knew about the proceedings. Some of them excused themselves by saying they had been away part of the time. How a complete set of the transactions will be prepared I am sure I know not.

One of your London contemporaries sent a representative accompanied by a short-hand writer. The former found such insurmountable difficulties in getting information that, finding his short-hand writer practically useless, he told him he might as well go off to Norway, or somewhere else, and take a holiday.

The sections unfortunately did not meet near together, but in three different places, any one of which was roughly speaking a mile from either of the others. As the fourteen sections all met simultaneously, your readers can form some idea of the difficulties of getting information from each.

Passing to more pleasing recollections let me say that the trip to Elsinore, in which nearly all the members of the Congress participated, was most enjoyable. The luncheon in the Kronberg Castle was laid in twenty-two rooms.

Perhaps of all the scenes in connection with the Con-

gress the banquet in the tent on the Custom House Quay will be the longest remembered by those who were present. This was on Thursday afternoon. It began at five o'clock and terminated about half-past eight. To accommodate the immense number present—about two thousand, including visitors—forty-two tables were laid. To wait on the army of guests one hundred and sixty-eight servants were provided, who served the successive courses as the signal was given by ringing a large bell. The *menu* was sumptuous, but most unlike an average London or Parisian dinner. The speeches, too, were given in a most eccentric manner. The guests were not allowed to dine in peace and then enjoy the "feast of reason" and "flow of soul" afterward, but they were interspersed between the courses, sandwiched, in fact, between the viands provided for mere bodily refreshment. They began directly after the soup had been served and partaken of, and from thence onward to the conclusion of the meal either a speech, a song, or music diversified the intervals between the courses. When a speech was being delivered by an eminent member the dinner was forgotten and the assembly vacated their seats *en masse* and rushed to the other end of the immense tent so as not to lose a word. Venerable and distinguished members of the profession were seen running helter-skelter like so many schoolboys. I saw one specimen of the latter genus present by the way—apparently a son of one of the members present. Sir James Paget spoke to him and said, "I am very glad to see you, my boy. We shall all of us remember this occasion to the end of our lives, but you, being the youngest of us, will remember it longer than any of us." Virchow also spoke to him.

Despite the successive interruptions the vast dinner came to an end at last. All then embarked on board the steamers provided and went by way of the canal to the Tivoli Gardens. The banks were lined with spectators, who cheered loudly as the Congress passed. Many boatmen were on the canal and cheered and saluted with their oars as they passed us. Many of them burnt blue and red lights. Rockets and other fireworks were discharged, illuminations were displayed, and the electric light shone brightly from many vessels and houses. At Tivoli about forty thousand people had assembled. The whole formed a never-to-be-forgotten sight. The closing festival on Saturday was also brilliant.

I must not omit to mention that throughout the Congress free lunches were provided for such as chose to partake of them. Free railway passes were also granted from Copenhagen to the frontier.

Despite a few drawbacks, I think I may safely say, in conclusion, that all who took part in the Congress of 1884 will remember with pleasure the courtesies and hospitalities shown them by the Danes in their beautiful capital, Copenhagen.

Muriate of Ammonia.—It increases the secretion of mucus from the alimentary canal, and is supposed to render the blood less plastic and coagulable, without impairing the structure of the corpuscles. Its habitual use causes emaciation, renders all the secretions freer and more abundant, and exerts an alterative and absorbent action, especially on the connective tissues, in hyperplasia and cirrhosis of many organs. It has even exerted some beneficial influence upon fibrous tumors of the uterus, and much more upon chronic engorgement of that organ. Its slow but steady modification of the nutrition of the connective tissues has been seen in chronic enlargements of the liver, spleen, prostate, thyroid, and other enlargements. It cures many cases of gleet and if any internal remedy will relieve strictures of the urethra, this is the one most apt to do it. It cures some cases of neuralgia depending upon thickening of the neurilemma, and is one of the best remedies in fibrous phthisis. If other remedies fail, it should be tried in sclerosis of the cord and brain depending upon thickening and induration of the neuroglia.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August 31 to September 6, 1884.

Byrne, Charles C., Major and Surgeon. Relieved from duty in Department of California, and to report in person to the Commanding General, Department of the Platte, for assignment to duty. S. O. 207, A. G. O., September 3, 1884.

Town, F. L., Major and Surgeon. Relieved from duty in Department of the Columbia, and to report in person to the Commanding General, Department of Texas, for assignment to duty. S. O. 207, C. S., A. G. O. Granted leave of absence for twenty-five days. S. O. 127, Department of the Columbia, August 25, 1884.

Havard, Valery, Captain and Assistant Surgeon. Relieved from duty in Department of Texas, and to report in person to the Commanding General, Department of the East, for assignment to duty. S. O. 207, C. S., A. G. O.

Hall, William R., Captain and Assistant Surgeon. Relieved from duty in Department of Texas, and to report in person, on October 1, 1884, to the Superintendent General Recruiting Service in New York City, for duty at David's Island, N. Y., relieving Assistant Surgeon M. E. Taylor from duty at that station. S. O. 207, C. S., A. G. O.

Hopkins, William E., First Lieutenant and Assistant Surgeon. The leave of absence granted him in S. O. 67, August 7, 1884, Department of Arizona, is extended one month. S. O. 204, A. G. O., August 30, 1884.

Official List of Changes in the Medical Corps of the U. S. Navy, during the week ending September 6, 1884.

Rixey, P. M., Passed Assistant Surgeon. From special duty at Washington, D. C., September 8th, to the Lancaster, European Squadron.

Oberly, A. S., Surgeon. From the Richmond, August 30th, and wait orders.

Dickson, S. H., Passed Assistant Surgeon. From Arctic Squadron, July 29th. Sick leave August 30, 1884.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending September 6, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
August 30, 1884	0	34	28	5	38	30	0	0
September 6, 1884	0	48	30	2	34	16	0	0
Deaths.								
August 30, 1884	0	11	5	4	12	17	0	0
September 6, 1884	0	18	6	2	9	9	0	0

Famous Examples of Nervous Exhaustion.—Much of the world's best work has been done by neurasthenics, says Beard. George Eliot, Darwin, Heine, Spencer, Edwards, Kant, Bacon, Montaigne, Joubert, Rousseau, Schiller, illustrate the possibility of not only living, but of doing original work on a small capital of reserve force.

The American Laryngological Association Viewed from the Outside.—The *Burlington Hawkeye*, in noticing the holding of the sixth annual Congress of the American Laryngological Association, takes occasion to thus enlighten the lay public as to the nature of that body and its functions: "A laryngological association, my dear, is, we take it, an association of larynxes. And a larynx is—well, it is the active principle of your 'Adam's apple;' the larynx lives in your neck, third floor front, between the tongue and the trachea; it has nine cartilages, and looks like an old garden hose gone to seed. And its uses are—well, you know when a little mouse runs across the floor? Well, your larynx is what you use then. 'Climb on the table with it?' Great Scotland, no! Who ever heard of climbing up on a table with your larynx? No, girl; you 'holler' with it. That's what you do with it, and no foolishness about it, either. And this American Laryngological Congress, we suppose, is organized to devise some means whereby to supply a new India-rubber, copper-lined larynx for the star-eyed goddess of reform, she having shrieked hers wide open and split it down the back when Morrison fell."

Chloroform in the Treatment of Tape-worm.—Dr. Henry K. Gardiner, of Providence, R. I., writes: "In Vol. 26, No. 4, Medical Record, Dr. J. G. Brooks reports several cases of tape-worm treated by chloroform, and claims excellent results. Having a case which I had previously treated unsuccessfully, I prescribed the following: ℞. Chloroform, ʒ j.; muc. acaciæ, ʒ iij. M. Sig. All to be taken at once after twenty-four hours' fasting, to be followed in thirty minutes by two drops of croton oil mixed with bread crumbs. It produced complete anæsthesia of the patient in two or three minutes, the effects lasting ten minutes; and for some hours after headache and drunkenness were complained of. The ol. tiglii was given an hour after taking the chloroform, and tape-worm expelled entire in about twenty minutes. I should like to hear of other cases where the action of chloroform was similar."

Internal Use of Nitrite of Amyl.—Dr. J. F. Dixon writes to the *British Medical Journal:* "There is only slight mention in the text-books, and scarcely any reference in periodical literature to the internal use of nitrite of amyl. Its very temporary and ephemeral action when inhaled has plainly caused therapeutists to cast about for an agent which produces more continuous results. I believe that in nitrite of amyl given internally we have a drug which meets all the requirements of cases in which it is important to lower the arterial tension; and further, that it is free from the uncertainty of action and the sometimes dangerous results of nitroglycerine and nitrite of sodium, which have been employed apparently as substitutes for it. I have employed it thus in cases of anginous attacks of a very severe character. One, complicated with very loud mitral systolic murmur and nightly angina; the second with an aortic systolic murmur, and the third with irritable action, but no apparent organic lesion. I may say, without going into particulars, for this purports to be the merest sketch, that in all these cases the relief was of a marked and abiding character. The dose I employed was 2½ minims three times in twenty-four hours—of course, seeing the case twice daily until the action of the drug was established, when a dose each night was sufficient.

Dissensions in the Baltimore Medical College.—For some months past, says the *Maryland Medical Journal*, rumors have been afloat of inharmonious proceedings in the Faculty of the Baltimore Medical College. We now learn that these have gone so far as to result in a division, and there are now two faculties, each claiming to be the rightful Baltimore Medical College. One faction, headed by Dr. Bryd, has secured a building in the eastern section of the city, while the Munroe party is entrenched in one in the northern part of the city. Each has issued a catalogue, and matters are rapidly coming to a crisis. An early suit, to determine who is legally entitled to the rights and franchises conferred by the charter, is foreshadowed.

Cerebral Congestion during Mental Work.—Mr. Beecher once told the late Dr. Beard that after preaching his head and neck are sometimes so surcharged with blood that a large seventeen-inch collar is very tight for him, but in an hour or two the circulation is restored and no harm results.

Quinine Diminishes Sweating after work upon a hot summer day, according to Liebermeister and Kerner.

That Florida Climate.—*Mens conscia recti* is not much disturbed by slander. We continue to receive earnest protests from Gainesville physicians regarding the views on the climate of Florida promulgated by Dr. Boyland. We had every reason to believe that the views expressed were essentially correct, nor do we think that in a calm discussion it would be found that he differed very much from the local physicians. Florida is an excellent place for many cases of incipient phthisis; but it does not benefit all cases. On the other hand, the climate is often of the greatest benefit in nervous, catarrhal, and rheumatic troubles. This is the substance of the matter. *Per contra*, Florida is not always Paradise. It has no cataracts, no rushing streams, and its most admiring residents refer to mounds of earth sixty feet high as hills. It will be difficult to prove, therefore, that its topography is admirably adapted for drainage. However, we have not the slightest desire to do injustice to the State or any part of it. We therefore publish a portion of an account by Dr. N. D. Phillips, of the topography of Gainesville, and with this we must close the discussion. Dr. Phillips says: "There is a never-failing stream of limpid water running through the town from north to south, which stream separates Gainesville from East Gainesville. From the point where said stream enters the northern boundary, to where it crosses the southern boundary of the town, there is a fall of forty-seven feet. The bed of this stream, due east of the public square, is thirty-five feet below the general level of the town on either side, and grows deeper as it meanders among the hills on its way to Alachua Lake, *eighty-six* feet below the centre of Gainesville. Due west of the public square about four hundred yards, is the head of a deep ravine, also running south, with precipitous banks, fed by never-failing springs of pure water. The fall in the bed of this stream is greater than in that of the stream just mentioned." Another stream is described arising near the town and emptying into Canapaha Lake. "Alachua and Canapaha Lakes both have subterranean outlets, which outlets are sufficient, although the lakes are fed by numerous springs and bold streams, to prevent them from overflowing their banks, even in the wettest seasons." With reference to the "stagnant water of which the doctor speaks, it is only necessary to state that *tons* of the finest fish are caught from Alachua Lake annually and shipped to cities north of this, and a great deal of money realized from the business." We are told that since the leading hotel was built, in 1876, only eight deaths have occurred within its walls. Gainesville is 213 feet above the St. John's River at Palatka, and 86 feet above Alachua Lake.

The Forceps in Breech Presentations.—Dr. J. H. Fruitnight, of this city, writes: "In connection with the short notice of 'The Forceps in Breech Presentations,' on page 192 of your valuable journal of the issue of August 16th, let me direct your attention to a paper written by me on that subject and published so long ago as July, 1877, in the *Virginia Medical Monthly*, page 246, and which, so far as I know, is one of the first articles advocating such use of forceps."

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THE RECTUM CONSIDERED AS A RECEPTACLE FOR THE GRADUAL ACCUMULATION AND RETENTION OF THE EXCREMENTAL MATTER.

By WILLIAM BODENHAMER, A.M., M.D.,

NEW YORK.

OWING to the recent attempts of some authors to sustain with new arguments the theory of Mr. O'Beirne, that "the rectum is not a receptacle for the fecal matter, neither was it ever so designed," I feel disposed to offer some arguments in favor of upholding the opposite theory. The late talented Dr. Bushe, many years ago, made a very able argument against the theory of Mr. O'Beirne.[1] It will be perceived, however, that the line of my argument differs materially in several respects from that of Dr. Bushe.

As a preliminary to the investigation of this subject, it is necessary to consider briefly the form, position, direction, dimension, and structure of the rectum, as well as the effect of that structure upon the accumulation of fecal matter in its cavity.

The form of the rectum at its commencement, like that of the sigmoid flexure of the colon, with which it is continuous, is cylindrical, and it maintains this form throughout a considerable portion of its extent; but toward its inferior extremity it becomes large and saccated, forming a terminal pouch, which is dilated from before backward and the mouth of which is closed by the internal sphincter muscle, like a purse. This dilatation, or ampulla, in consequence of the peculiar organization of the parts, is capable of acquiring great size, and in some instances of long-continued retention of fæces it has been found to occupy a very large portion of the cavity of the pelvis.

The structure of the rectum, like that of other hollow viscera of the abdomen, is composed of three regular tunics—a *scrous* or *peritoneal*, a *muscular*, and a *mucous*—which are intimately blended and united to each other by cellular tissue. This connective tissue has been distinguished by some anatomists as an additional coat of the rectum, thus making this organ to consist of four tunics, instead of three, and which tissue they have severally denominated *cellular*, *submucous*, and *nervous*. Be this, however, as it may, it nevertheless is most certainly the connective tissue between the peritoneal and muscular, and between this last and the mucous coat, and may be regarded as constituting the framework of the rectum.

As regards the structure of the rectum, its several coats are gifted with peculiar functions in health, and when under the influence of disease each is subjected to peculiar affections. The muscular coat of the rectum especially possesses great interest, for in this coat resides its contractile power, and to this coat is it indebted for its properties, both as a retentive and as an expulsive organ. The muscular coat is composed of longitudinal and of circular fibres, the disposition or distribution of which merits the careful study of the physiologist. The peculiar arrangement of the longitudinal and circular fibres of the rectum, which differs essentially from that of any other portion of the intestinal canal, has furnished this organ with the power, to a certain extent, of retaining and controlling its contents. The longitudinal fibres are much larger and stronger in the superior portion of the rectum, especially anteriorly and posteriorly, and they become smaller and weaker as they approach the internal sphincter ani. By this change or alteration in the arrangement of these fibres the rectum is enabled, in its inferior portion or pouch, to retain a larger quantity of fecal matter. The circular fibres, on the contrary, are smaller, fewer in number, and more feeble in the superior portion of the rectum where they are less needed and where the action of the abdominal muscles is alone sufficient to propel the contents of this intestine downward. As the circular fibres, however, approach the inferior portion of the rectum, they are more numerous and strong where they are most needed, and are finally blended and constitute the internal sphincter ani. The force exerted by the abdominal muscles in the act of defecation is chiefly expended upon the superior part of the rectum, where the antagonists, the circular fibres, are weakest, and it is exactly in the same ratio in which this force diminishes in the inferior portion of the rectum that the contractile power of the circular fibres in this situation increases. These are facts which cannot be controverted and must not be ignored in the consideration of this subject.

The mucous coat of the rectum, from its peculiar structure, is well adapted for the passage over it of extraneous bodies. It is studded with numerous mucous glands or follicles, from which are derived the mucilaginous fluid which so abundantly lubricates its interior surface, so as to facilitate the passage of the fæces and at the same time to protect itself from mechanical violence. Without this secretion of mucous, or some such lubricating substance, it would be almost impossible for the fæces to be expelled.

The rectum, therefore, being composed of membranous and muscular tissue, is by the first well fitted both to yield and to expand to a gradual and gentle distending force, so as to form a perfect recipient reservoir for fecal matter; while the contractile power of the latter is well fitted to obliterate the cavity of the organ and forcibly eject its contents. This musculo-membranous viscus, then, demands attention, not only as to its structure, but also as regards its situation, form, direction, relations, and connections. The form and direction of the rectum, as well as the structure of its several coats, and its peculiar muscular equipment as a receptive, retentive, and expulsive organ, display a most admirable provision of nature to enable it to perform its numerous offices; indeed, its entire anatomical arrangement evinces a design far beyond human ingenuity.

The utility of the direction of the rectum will at once appear evident when we take into consideration that had this organ been *straight*, as its name implies, we should have been constantly subjected to the unpleasant annoyance, especially when in the erect posture, of a disposition to empty it; its peculiar direction and formation, however, happily protect us against this; and, furthermore, the pouch located at its inferior extremity, allowing a large accumulation of fecal matter to collect, gives sufficient time to the absorbents of the part to take up any nutritive particles that might still remain in the fecal mass. Precisely the same kind of ampulla or en-

[1] A Treatise on the Malformations, Injuries, and Diseases of the Rectum and Anus, p. 23 et seq. 8vo. New York, 1837.

largement obtains in all canals of this character, at such parts of them as have normal contractions below them. In this instance the anal sphincters are the contractors or constrictors and form the impediment to the further progress of the fecal matter for the time being.

I would further remark, with regard to the pouch of the rectum, that Mr. Colles says, that "it is much more evident in adults than in children; however, it will be found in children, except in those of one or two years."[1] Some years ago I examined, *post mortem*, the rectum in several children, their ages varying from six to eighteen months, and in each case I found the rectum of nearly the same diameter throughout its entire length. No dilatation could be observed toward its inferior extremity in any one of these subjects. This pouch evidently does not exist in early infancy, but is subsequently gradually developed, and is doubtless the result of distention, caused finally by the retention and accumulation of the fæces. This begins to take place as the act of defecation comes under the influence of the will; for then it is that the dejections become much less frequent, the fæces increase both in quantity and in consistency, and are suffered to accumulate for a length of time, or until they provoke by their presence, perhaps, the expulsive movement. In early life defecation is chiefly reflex, but it gradually becomes voluntary by habit. In children the fecal dejections take place more frequently than in adults, being usually in proportion to the number of meals. This frequency is doubtless owing to the digestion of children being much more rapid, the intestinal secretions more profuse, the fæces much more fluid, and the sensibility of the alimentary canal much greater. It may also in a great degree depend upon the fact that in childhood the rectum, as before observed, is wholly uninfluenced by the will.

To the rectum, then, of the adult, and especially to its capacious pouch, belongs the office of reception, accumulation, and retention of the fecal matter; while to the anal sphincters, like sentinels, belongs the office of opposing its exit for the time being, and finally of giving permission and of aiding in its expulsion. The rectum, therefore, may with great propriety be denominated the *terminal depôt* of the alimentary canal. Indeed, it is the natural depository of the excrementitious matter just previous to its final exit from the body, except the parts are under the influence of certain diseases, such as dysentery, diarrhœa, etc., when the fæces will not be tolerated in the organ for a moment, but will be expelled as soon as the smallest portion presents itself in it.

It must now be observed, however, that the very able and distinguished physiologist, Mr. O'Beirne, of Dublin, in 1833, as is well known, positively denied that the rectum was a depôt or receptacle for the temporary lodgment of the fæces. He maintained that the sigmoid flexure of the colon was the chief receptacle for the fecal matter while accumulating in quantity sufficient to furnish a proper stool; that in health the pouch of the rectum was always empty of fæces, except immediately before an evacuation; and that the upper part of the rectum intervening between the colon and rectal pouch was not only always empty but firmly contracted by the circular muscular fibres.[2]

Now, according to Mr. O'Beirne, the sigmoid flexure of the colon is the chief depôt for the deposit and retention of the alvine excretions, while the rectum is the mere avenue for the transmission of such, or the mere faucet or funnel through which such are rapidly passed out of the body when called into requisition by the sigmoid flexure. Hence there is no necessity, according to Mr. O'Beirne, for the rectal pouch, nor for the anal sphincters below it, which guard it, inasmuch as his colonic pouch or receptacle is guarded by the superior portion of the rectum, which he says is always firmly contracted and acts as a sphincter, and consequently that the power of retaining and controlling the fecal discharge does not depend upon the anal sphincters.

I, however, hold that the colon and rectum are one continuous canal, and their junction is not provided with a sphincter muscle, such as are the anal sphincters. Indeed, Mr. O'Beirne, feeling the absolute necessity of a recto-colonic sphincter to protect his theory and his colonic pouch, endeavors to prove that the whole of the superior portion of the rectum acts in the capacity of such a sphincter muscle. I, on the contrary, however, positively maintain that the superior portion of the rectum is not any more firmly contracted than any other portion of the intestinal canal not supplied with a sphincter or sphincters, as any expert can at once verify by the proper exploration. It is true the fæces are retarded, and consequently detained longer in passing through the coiled portion of the colon, but this detention there is not owing to any sphincter or sphincters, but is obviously owing to the peculiar form, direction, and position of the sigmoid flexure. It may be admitted that the fæces in the coiled portion of the colon, as in the cæcum, are for obvious reasons detained longer in passing these points than they are in passing other parts of the colon, but this fact alone does by no means constitute these portions of the colon reservoirs for the accumulation of the fæces, as some authors claim, to the exclusion of the rectum as such.

With regard to the very plausible and ingenious theory, so ably presented by Mr. O'Beirne, I respectfully beg leave to differ from it in several respects; for instance, instead of the healthy rectum being always empty between the periods of defecation, as he contends, I am of opinion that it is never entirely so. I hold that even immediately after a natural evacuation of the rectum there is still more or less consistent excrement left in the superior portion of it; indeed, it is more in the character of a displacement merely of the fecal matter of the inferior portion of the rectum, in the ordinary calls of nature in healthy persons, than by a complete evacuation of the whole contents of the organ; for it must be observed that besides the contractile power of this part of the rectum itself the *vis à tergo* of the consistent natural excrement also powerfully aids in effecting a dislodgment or stool. When the rectum is completely emptied by an active cathartic, or a stimulating enema, or as in some diseases, such as dysentery, diarrhœa, the *vis à tergo* is for a time absent, and in a person of good health it requires from two to three days to re-establish it, by the rectum becoming moderately repleted again and so making provision for this part of the natural mechanism by which the consistent fecal matter is ordinarily discharged. The rectum, then, which was designed by nature to serve the place of a reservoir, is never entirely empty when in its normal and healthy state, but always contains some fecal matter in some portion of it, and it is the inferior portion only that is generally evacuated when naturally called to perform this act.

In the exercise of my profession, during a practice of many years, I have examined the rectum in numerous instances, some with special reference to this very question, and I have scarcely ever failed to discover more or less fecal matter in some part of the organ. If the rectum is examined twenty-four hours after an evacuation, the fecal accumulation during that period will generally be found lodged a little beyond the superior margin of the internal sphincter, about four inches above the verge of the anus. With this intention I have examined the rectum in the same individual as often as two or three times in the twenty hours; and for this purpose I use a bivalve speculum ani, introduce it fairly above the internal sphincter, open it sufficiently, and then, through the open blades of this instrument, pass up a No. 2 or 3 English rectal bougie to the superior end of the rectum and withdraw it, and if it has come in contact with fecal matter some of it will adhere to the bougie and can be plainly perceived. In some instances I have found that

[1] A Treatise on Surgical Anatomy, p. 137. 8vo. Philadelphia, 1831.
[2] New Views of the Process of Defecation, p. 3 et seq. 8vo. Dublin, 1833.

the bougie could scarcely be pushed up through the column of solid excrement, which had evidently been lodged in the rectum for many hours. This condition of the solid excrement found in the rectum I have observed to be more common in females than in males. This, however, is said not to be the experience of gynecologists generally, who now, more than ever before, very properly make use of the rectum for diagnostic purposes. But I by no means agree with the author, who says that "gynecologists by their daily examinations in the vagina are quite familiar with the fact that the *rectums*, even of women of torpid habits, are comparatively seldom found loaded with fæces, but empty and flattened between the vagina and the sacrum." I have found that if the examination of the rectum be made just before the usual daily evacuation the fecal mass may often be detected, even by the finger, in ano.

In the dead body I have never found the rectum to be entirely empty, and it may be observed that in anatomical examinations healthy excrement is just as often found in the rectum as in the sigmoid flexure of the colon; indeed, it is sometimes found collected in the caput coli, which has been considered by some as a fecal receptacle, and sometimes found at an intermediate point. This, it appears to me, must be the experience of every one who has had frequent opportunities of examining these organs in the cadaver.

Mr. O'Beirne, in accordance with his theory, has been compelled to assume as probable phenomena which do not admit of positive or demonstrative proof; for example, his conception of the manner in which the fæces are unloaded from or emptied out of the sigmoid flexure into the rectum is, in my opinion, purely hypothetical. I therefore believe that some of his views on this subject are theoretically wrong. I wish particularly to mention here that the healthy fæces do not pass out of the coiled portion of the colon into the rectum continuously, for they, like in other portions of the intestines, are not perpetually in motion, but their movement is intermittent. They neither pass out of the sigmoid flexure at once in bulk sufficient for one ordinary stool, the result of one day's accumulation, as Mr. O'Beirne declares, but pass into the rectum at intervals in small portions, each portion being the fecal residue of but one meal of the solid ingesta of the stomach. As each successive portion is received in the superior part of the rectum, the former one is propelled forward by the impulse given it from behind, assisted by the contractile or vermicular power of the part itself, until it eventually arrives at the inferior part of the rectum, where it and the portions that follow in the same manner slowly accumulate, assume shape and figure, and gradually and gently distend the organ. As a general rule the excrementitial residue of one day's aliment taken into the stomach and amassed in the rectum is considered sufficient to provoke the expulsory movement.

Mr. O'Beirne being continually confronted by the fact that between the periods of defecation fæces were found in the rectum, which he had declared to be always empty, was compelled to notice this, to him, singular circumstance, and to account for it. This he does by attributing it entirely to morbid phenomena, and admitting that by such even the rectum itself may become the final reservoir of the fæces in place of the sigmoid flexure. He says this result is brought about when the whole of the rectum, together with the sphincters, is rendered paralytic. He is very safe in making this admission, for it is well known that injuries of the brain and spinal marrow may and do result in paralysis, not only of the rectum but sometimes of the coiled portion of the colon, as well as other portions of the intestinal canal—thus converting such portions, for obvious reasons, into reservoirs, or stopping-places for the fæces. In compression of the brain the external sphincter is almost entirely disabled, and in compression of the cord the power of the internal sphincter is also impaired. A morbid condition of the rectum, however, in a modified degree, may be produced by atony of its walls, and perhaps this is what Mr. O'Beirne means by the use of the word *paralytic*, that is, merely debility or want of tone. The rectum, like all other hollow viscera, may be subjected to paralysis from injuries of the brain and spinal marrow, as has already been observed, or to atony from undue distention of its parietes by fecal matter, by gas, or by both, as well as from other causes. But the question here, however, is not what the rectum may become by disease, such as paralysis, spasmodic or organic stricture, atony, etc., but is the rectum naturally and in health a receptacle for fæces? That is the question, for it must be understood in this affair that whatever is said concerning the rectum and its functions or actions, both directly and indirectly, must have reference only to its healthy or normal, and not to its morbid or abnormal condition.

One of the recent and ardent advocates of the theory of Mr. O'Beirne, after first declaring that the sigmoid flexure of the colon is the proper receptacle for the fæces, and that the rectum was never designed for such a purpose, proceeds to account for the puzzling phenomenon of finding fecal accumulations in the rectum between the periods of defecation. He declares that whenever fæces are thus found lodged in the rectum it is entirely owing to atony of the walls of this organ, by which it is incapacitated or indisposed to forward on through it at once, without stoppage, the contents of the sigmoid flexure, hence fæces are permitted to accumulate in it. The atony of the rectum is brought about, says he, by the repeated neglect of the calls of nature, by which the rectum is gradually educated to tolerate that which is really irritating to it, and it is only the educated or atonied rectum that ever contains fæces between the periods of defecation.[1] The argument of this author, like that of Mr. O'Beirne, is that the rectum in its healthy state is always empty between the periods of defecation; and that this being its normal condition it cannot, therefore, be a natural reservoir for fecal accumulation; but by pernicious education, however, which he explains, this very susceptible organ may be taught to tolerate in its natural empty, sensitive, and contracted cavity, the presence and the lodgment of fecal matter; and thus finally become that which was not designed by nature, namely, an artificial depository for excrement. The whole argument of this author is to prove that the rectum can be converted artificially into a fecal receptacle by education, as if that was the question at issue, but not a single argument does he give to prove that the uneducated rectum is not normally such a receptacle. This it behooved him to do first, and afterward to account for the fact of fecal matter being found in the cavity of the rectum.

I maintain that the rectum is naturally the terminal depôt, or last resting-place for the healthy excremental matter previous to its final evacuation from the body, and that it tolerates such there for a certain period without being specially educated to do so, for that is its normal function. This is proved by its anatomical structure, its peculiar nervous endowment, and by the fact that, more or less healthy excrement will always be found in some part of the cavity of a normal and sound rectum. This, indeed, is the rule; the reverse of this is the exception. It is true that, by repeated neglect to respond to the daily calls of nature to empty the sound rectum, constipation, or a morbid condition of its parietes is sooner or later induced, by which its sensibility is blunted and its contractile power more or less diminished, this morbid condition being of course greatly aggravated by the repletion, irritation, and excessive distention which follow; so that the rectum ultimately becomes capable of containing and tolerating a much larger quantity of excrement at any one time than normal, and also of retaining it much longer, too, without the natural admoni-

[1] Philadelphia Medical Times, p. 582, November 18, 1882.

tion to move it. But this morbid state of the rectum, by whatever cause produced, is no evidence whatever that it is not a natural receptacle for excrement, previous to such morbid condition consequent upon artificial training.

The *nisus defæcans*, or sensation for the evacuation of the fæces, takes place in the rectum, where it should, and not in the sigmoid flexure of the colon, as Mr. O'Beirne and his advocates claim. The coiled portion of the colon is not under the influence of the will in its movements, but is entirely governed by the automatic operations of the other portions of the intestines, and which terminate at the inferior portion of the rectum, which portion we know is under the direction and control of a separate and entirely different set of nerves. It is doubtless in this portion of the rectum that the *nisus defæcans* originates, and it is through these nerves that the sensation is communicated. The association which exists between the functions of these different nerves is brought into action periodically, when in health, by the distention of the walls of the rectum arriving at a certain stage. This united action, from various causes, as I have already shown, may be disturbed, or it may not be in equipoise, and artificial means, such as cathartics, enemata, or stimulating applications to the lining membrane of the organ, may be required to reproduce the suspended co-operation.

While some physiologists are of opinion that the uneasy sensation which arrests the attention of the will to the act of defecation resides in the rectum, there are others, however, who believe that it does not take place solely in that organ, but is often seated in the stomach, more frequently in the small intestines, and sometimes only in the imagination. Mr. O'Beirne, as before remarked, is of opinion that it originates in the sigmoid flexure of the colon.[1] My opinion is that this admonition originates in the rectum alone, the natural reservoir, in a normal and healthy condition of all the parts concerned, because no portion of the intestinal canal is supplied as this is with the proper nerves to communicate it. When it is experienced in the stomach, in the small intestines, or anywhere else, except in the rectum, it must be in consequence of disease of the stomach, or of such portion of the intestines, or of the brain or nervous system. As to the cause of this admonition there are various opinions. Some allege that it is induced by the mechanical distention of the parietes of the rectum, the result of accumulated fecal matter, gas, or both, and I am of this opinion; others, that it is produced by the mere contact of the fecal matter, the natural stimulus of the intestines, with the interior surface of the rectum; others, again, that it is caused by the acrimony of the fæces, acquired by their retention in the rectum. The truth, however, is that the cause of this sensation is not positively known, consequently all in relation to it is more or less conjectural. Analogy shows that nature employs a somewhat similar agency in the case of other hollow viscera provided with muscular fibres, as the bladder and the uterus.

Mr. O'Beirne's peculiar neurological views on this subject, his ideas on the peristaltic motion or intestinal action, etc., will be fully considered hereafter in a separate article, on the "Anatomy and Physiology of the Sigmoid Flexure of the Colon."

249 Madison Avenue, New York.

Verges.—Old Dogberry's fellow officer derived his name from the corruption of *verjuice* into verges. Verjuice is *verdjus*, or the juice of any green fruit, such as the acid liquor expressed from wild apples, sour grapes, etc.

Sickness and Morals.—"Every man is a rascal as soon as he is sick," said Dr. Johnson.

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[1] Op. cit., p. 18.

ON THE TOLERANCE OF CORROSIVE SUBLIMATE IN SMALL AND FREQUENT DOSES.

By ANDREW H. SMITH, M.D.,

new york.

As preliminary to the more extended use of corrosive sublimate as an anti-zymotic or anti-ferment, it is important to settle the question of the safety or danger of administering it in such quantities as may reasonably be expected to act upon the mass of the blood in such manner as to destroy a poison floating in the circulation.

The dangers to be apprehended are, first, local irritation; second, mercurial poisoning.

The following observations will help to form an estimate of each of these dangers. It may be premised that in no case was the degree of dilution less than one in ten thousand. The first eight observations were at the Presbyterian Hospital during my service, and for the notes I am indebted to the kindness of the house physician, Dr. Charles G. Wagner.

Case I.—Annie C——; Irish; married; forty years of age; admitted April 21, 1884. Disease, phthisis pulmonalis, third stage. Patient had been under observation three weeks when mercurial treatment was begun. Temperature had ranged from 100.5° to 103.5°.

May 10th.—She was given hydrarg. bichlor., gr. $\frac{1}{20}$ every hour for seven hours. Temperature did not rise within a degree as high as on the previous evening.

May 11th.—Bichloride continued (largely diluted), gr. $\frac{1}{20}$ every hour for eight hours. Temperature nearly two degrees lower than on previous night.

May 12th.—Bichloride continued. Temperature in morning was normal. In the evening it rose only to 100°.

Treatment was continued, and the case remained unchanged during next three days. On the fourth, patient had bloody diarrhœa, and the bichloride was stopped. Diarrhœa lasted but one day. Treatment was not resumed.

Case II.—Gertrude M——; Irish; single; domestic; twenty-six years of age; admitted February 17, 1884. Disease, chronic diffuse nephritis with mitral regurgitation. Patient had been under observation three months when hydrarg. bichloride treatment was begun. She had for several weeks been passing a very small amount of urine.

May 17th.—Patient was given hydrarg. bichlor., gr. $\frac{1}{20}$ every two hours during the day (none at night). The immediate effect apparently was to increase the quantity of urine. She continued to take the drug for four days, when she had bloody diarrhœa, but no pain in the gums nor any salivation, the bichloride was suspended and the diarrhœa ceased after six or seven passages. Treatment not resumed.

Case III.—Patrick McK——; Irish; single; driver; forty-seven years of age; admitted May 2, 1884. Disease, tertiary syphilis, pachymeningitis (cephalalgia). Patient was put immediately on hydrarg. bichlor., gr. $\frac{1}{16}$ three times a day, with potassii iodidi, gr. xv. t.i.d.

May 15th.—He was put on hydrarg. bichloride, gr. $\frac{1}{20}$ every hour during the day (not in the night). Treatment continued daily until May 20th, when patient had pain in the jaws, and gums felt sore, no marked salivation. Hydrarg. bichloride stopped; ordered, K_2ClO_3.

Case IV.—Julius J——; American; single; twenty-one years of age; admitted April 26, 1884. Disease, chronic diffuse nephritis. Patient had been under observation in the hospital about three weeks; was passing fifty to sixty ounces urine a day, which contained albumen and casts.

May 18th.—He was put on hydrarg. bichloride, gr. $\frac{1}{20}$ every hour. This was continued eight days, during daytime, with no apparent effect on any of the functions. The amount was then reduced to gr. $\frac{1}{16}$ every two hours, which he continued to tolerate until June 3d, when it was discontinued.

Case V.—John O'N——; Irish; married; aged fifty-five. Admitted March 23, 1884. Disease, chronic diffuse nephritis.

May 15th.—Patient was put on hydrarg. bichlor., gr. $\frac{1}{16}$ every four hours.

May 20th.—Bichloride increased to gr. $\frac{1}{16}$ every two hours.

May 27th.—Bichloride stopped. No effects noticed.

Case VI.—Daniel H——; nurse; widower; aged forty-six; admitted May 7, 1884. Disease, facial erysipelas.

May 7th.—Hydrarg. bichlor. was begun on May 10th; dose, gr. $\frac{1}{20}$ every hour during daytime.

May 12th.—Patient complained of pain in gums and profuse salivation. Hydrarg. bichlor. stopped. Treatment not resumed.

Case VII.—Dora V——; German; married; aged thirty-one; admitted March 31, 1884. Disease, phthisis pulmonalis, chronic diarrhœa.

May 21st.—Patient was given hydrarg. bichlor., gr. $\frac{1}{20}$ every hour. This was continued until May 23d with no obvious effect. It was then discontinued.

The following observations were made in private practice:

Case VIII.—Mrs. H——; puerperal peri-metritis with malarial complication. Bowels constipated; $\frac{1}{32}$ gr. bichloride given every hour for eleven hours, then $\frac{1}{16}$ gr. every hour for seven hours. Griping pain was then felt in the abdomen and three liquid evacuations occurred in rapid succession. Bichloride stopped, after which the diarrhœa ceased spontaneously. No stomatitis occurred.

Case IX.—J. B——, aged six years. Malignant measles with excessive temperature, $\frac{1}{20}$ gr. bichloride every two hours for three days. No irritation of stomach or bowels, no soreness of the mouth. The urine, which at first was very scanty, was increased to double the normal quantity. It contained no albumen.

Case X.—M. S——, six and one-half years of age; diphtheria following scarlet fever. Patient took $\frac{1}{25}$ gr. bichloride hourly, with very few omissions, day and night for a week, and the same quantity during the day with two or three doses during the night for several succeeding days. Chlorate of potash and tincture of the chloride of iron were given at the same time. The mouth was not affected and there was little or no irritation of the stomach or bowels. The urine was increased to seventy ounces, but fell to the normal amount when the drug was discontinued. It did not contain albumen during this time, though a very slight albuminuria was afterward developed.

Case XI.—Miss H. G——, fifty years of age, contracted kidney anasarca of legs; urine much decreased in quantity, but of high specific gravity, no nausea or other uræmic symptoms. One-twentieth of a grain in four ounces of water immediately produced gastric distress followed by vomiting. A second dose three hours later resulted similarly, and the patient declined to pursue the treatment further.

From an examination of these histories it will be seen that in five of the eleven cases, the bichloride given in quantities of from $\frac{1}{32}$ to $\frac{1}{16}$ of a grain, and at intervals of one or two hours, produced no ill effect. Of the other six cases diarrhœa with griping occurred in one, bloody diarrhœa in two, and ptyalism in two.

The bloody diarrhœa occurred in one case after seven hourly doses of $\frac{1}{20}$ grain the first day, and eight hourly doses on each of the four succeeding days. In the other case the drug was given in the same dose but at intervals of two hours throughout the day, and the bloody discharges occurred after four days. In both instances the diarrhœa ceased immediately on the withdrawal of the medicine.

Stomatitis occurred in one case after five days' use of the bichloride in hourly doses (during the *day*) of $\frac{1}{20}$ grain, and in the other case after two days.

In one case an idiosyncrasy caused gastric distress and vomiting immediately upon taking $\frac{1}{20}$ grain, and this recurred when the dose was repeated some hours afterward.

In one case of phthisical diarrhœa $\frac{1}{20}$ grain every hour for two days neither increased nor diminished the diarrhœa, producing in fact no obvious effect.

In two cases of children under seven years of age doses nearly equal to those given to adults were remarkably well tolerated.

In three cases, one of chronic diffuse nephritis, one of scarlet fever and diphtheria, and one of measles, the drug produced a marked diuretic effect.

In one case of phthisical hectic the temperature was apparently reduced in a marked degree by the bichloride.

ON THE PREPARATION AND USE OF OXYGEN AND ITS CONGENERS AS REMEDIAL AGENTS.

By SAMUEL S. WALLIAN, A.M., M.D.,

BLOOMINGDALE, N. Y.

(Continued from page 287.)

Methods and appliances for clinical exhibition.—As will be inferred, the use of these agents, although not necessarily restricted to these, is more especially adapted to office and hospital practice. For a complete office equipment in every considerable practice there should be at least three separate reservoirs. One should contain, at all times, pure oxygen, ready for instant use in cases of emergency; a second may contain pure nitrogen monoxide, and a third such modified admixture as is found best adapted to the class of cases under treatment. One or more additional reservoirs will at all times be found a matter of convenience, and in undertaking the treatment of a variety of cases in an extensive hospital or general office practice, quite essential. These should be arranged so as to be readily connected when desired. They may be placed in a suitable hall, closet, or private room adjoining the office, and connected with the latter either by ordinary gas-pipe or by rubber tubing. The latter may be neatly covered with rep or other suitable material, as a matter of taste.

The mouth-piece or inhaler may be of glass or hard rubber, and it is to be connected with the reservoir through covered rubber tubing and a glass bell, or a small-sized wash-bottle half filled (with simple water, a solution of caustic soda, or of any medicated solution desired), through which the gas is drawn in brilliant bubbles. A number of these bells or wash-bottles being kept on hand, each patient, or at least each class of patients, may thus be provided with an appropriate and separate solution.

In regard to proportions, a mixture very much used by me is composed of O two volumes, N_2O two volumes, and common air (to be drawn from a pure source) four volumes. In cases of extreme vascular torpor and functional inactivity a stronger mixture will be indicated, as O two volumes, N_2O one to two volumes, and common air one volume. Such a mixture is almost as efficacious, in emergencies and extreme cases, as pure oxygen; it is far better for ordinary use, and will answer every purpose in case of a sudden demand for the pure gas. Delicate patients will require the weaker mixture from the start, and after a few days of the more active treatment, very few cases will require any stronger. I would again most emphatically repeat what I have already several times asserted, that *a majority of experimenters with oxygen and congeners have failed and will continue to fail of good results on account of using the agents in too concentrated form.*

For a limited practice, in which one quality of gas must be made to serve a variety of patients, a compromise mixture of equal volumes of O, N_2O, and common air is as strong as should be used. This will be sufficiently potent for the severer cases, and must be cau-

tiously administered to susceptible patients and those in anything like a critical condition.

Time and frequency of administration.—Except in emergencies, the treatment should not be given either on an empty stomach or after a prolonged fast. In a majority of cases the mid-meal hours between breakfast and dinner are most favorable. It is well to avoid giving any active treatment within an hour of any principal meal, or at any time when there is present an unusual degree of fatigue. Mere weakness or nervous prostration do not, however, contraindicate, but are usually relieved by oxygen.

In cases complicated with persistent or periodic neuralgia, it will be advisable to supplement the regular daily sitting with a few inhalations just before retiring; and in these, as well as in extremely "nervous" or in hysterical cases, this evening exhibition should consist of as much as fifty per cent. N_2O.

As a rule, in ordinary chronic cases one treatment per diem is all that is advisable; in many cases it is all that is *allowable*. This should be carefully borne in mind by the inexperienced, since it is quite easy, and I had almost said natural, to overdo in the matter of dosage, in the anxiety of both physician and patient to see palpable signs of immediate improvement.

Methods, dosage, and intervals.—When feasible, let the patient stand erect, throwing the shoulders well back and as thoroughly as possible expelling the residual air from the lungs before inspiring the gas; then with a steady effort slowly inspire from the mouth-piece until the lungs are as full as they can be readily filled. Let the inspired gas be retained as long as convenient without discomfort, then slowly and deliberately expired. There should be an interval of from five to twenty minutes, according to the nature of the case, before a second inspiration is given, and during this interval the patient may walk about, sit, or recline, as he seems most inclined.

In ordinary non-critical cases, accompanied with venous stasis and general functional torpidity, from four to six inspirations, comprehending two to four gallons, may be given at each daily *séance;* but this limit should seldom be exceeded. Many cases will present in which two full inspirations will be all that should be exhibited during the twenty-four hours. In this regard the practitioner must be constantly on the alert, and must use the most careful discretion.

A systematic record should be kept of each case treated, beginning with a summarized history, a thorough physical examination, an examination of the urine, noting pulse- and respiration-rates, capacity of lungs, etc. The quantity per diem and specific gravity of the urine, as observed at stated intervals daily in critical or important cases, and at least weekly in all, during treatment, will furnish suggestive data from which to regulate the quality and quantity of gas to be exhibited.

If there be a tendency to hæmoptysis, oxygen is not necessarily contra-indicated, but evidently should be administered with more caution. I have not hesitated to advise the treatment in these cases, if not otherwise contra-indicated, and have never witnessed any untoward results; but the lungs should never be forcibly inflated, nor should the inspired gas be so long retained. As a further precaution, which, however, I am inclined to think is superfluous, it should be much diluted at the outset and gradually increased in strength with the progress of the case. I have even thought the use of the gas, with due precautions, has eventually lessened the liability to hemorrhage.

In acute cases, as of asphyxia from any cause, alarming dyspnœa, cyanosis, suspended animation, narcosis, severe paroxysms of asthma, etc., no definite rules can be formulated. The indications must be gathered in each instance from the nature and progress of the case, and the judgment of the practitioner must in all cases supersede all rules.

In cyanosis and asphyxia there is little danger of pushing the treatment too rapidly or too far, short of positively relieving the patient. The immediate demand is for *oxygen*, and it may be given, freely and constantly, until the imminent crisis has been passed and the urgent symptoms are relieved.

A practical suggestion.—In its incipiency every "new" treatment is called on to perform miracles, since at first only the most inveterate and apparently incurable cases will seek its aid. I would therefore utter this warning, and suggest that no such cases be received except with the express stipulation that the treatment shall be punctiliously followed for a definite period of, say, not less than two, three, or four months. It will be worse than throwing away time or than placing pearls before swine to permit the grand army of physical vacillators to spasmodically attempt the treatment, foolishly expecting that it will accomplish greater wonders than the touch of Midas' wand, and fully believing for a day that it is the latest "wonderful discovery" among patent nostrums. These will follow it for a few days or weeks, and will insist upon giving it up long before it has accomplished any definite or permanent good. They will be only a block of stumbling to its success with others, and will give you no end of annoyance by their irrational and short-sighted criticisms. Better decline to treat not only hopeless incurables, but all who will not stipulate to give the treatment a fair and thorough opportunity to accomplish tangible and permanent results. I would insist on this, even though it might appear to savor of the methods of the advertising charlatan. Thus, it would be a stroke of business prudence to charge each patient a maximum fee by the month for the first month, and minimum or perhaps graduated fees for subsequent months of treatment, since this will encourage perseverance on his part, and since the first month covers the period requiring most watchful care and intelligent adjustment of all the conditions.

Adjuvants.—As regards concurrent treatment by means of drugs, this must be left to the discretion of each practitioner, guided by the exigencies of each particular case. It must not be omitted whenever it rationally appears to be either synergistic or complementary. To reject any source of aid in treating maladies is to raise (or lower) any method of treatment to the questionable rank of a hobby.

Theoretically iron is an oxygen carrier, and in some instances it may be given with advantage during an oxygen course; but if the patient's diet be sufficiently varied so that it shall contain the earthy salts in due proportion, there will be little need for increasing the chalybeate element.

To this end, even though it may seem pedantic, I would distinctly urge, in connection with an oxygen course, the daily use of those cereal and other preparations known to be rich in phosphates and other needed elements, as oatmeal (coarse), white wheat (crushed or cracked), whole wheat flour, some of the principal elements of which are wanting in a majority of modern dietaries.

In connection with the use of oxygen the question of alimentation is of far more than usual significance. In all cases the diet should be thoroughly sustaining, and in some it should be abundant, even to the extent of forced feeding. Bearing this well in mind, no specific rules need be suggested. The necessity for an intelligently selected variety in diet suggests itself when we reflect that the subtle and powerful agent to which we are subjecting our patients rapidly permeates every molecule of matter in even the remotest tissues of the body. It accelerates at once the process of liberating worn material with retained and septic excretions, as well as that of rebuilding or repairing weakened structures. For all this work—destruction and reconstruction—liberal supplies of fresh material are in constant demand, and must be supplied with the food.

In all cases complicated by chronic gastric catarrh or

torpid states of any of the viscera, the somewhat overdone fashion of hot-water drinking, to the extent of two or three pints per day an hour before meals, will be found a valuable adjunct. If simple hot water be voted flat, hot lemonade or hot soda-water may be substituted, as indicated. The washing away of morbid products set free by the treatment is also quite an essential factor; hence, in addition to the hot-water drinking, the warm full bath, or a course of systematic bathing with massage, with also frequent local lavements, hot douches, etc., should not be omitted. These are invaluable adjuvants to any treatment.

The regulation of the general sanitary and hygienic surroundings of each patient need not be adverted to. The judgment of all intelligent practitioners will suggest this. One exception may be remarked in connection with this treatment: Deprivation in the matter of outdoor air and physical exercise, whether from negligence, necessity, or indifference, will not be so serious a drawback as in case of ordinary treatment, since superoxygenation to some extent supplies the lack. But blind faith in the treatment should not be allowed to exclude such aids as may be derived from any and all adjuvants.

I append reports of a few additional cases treated, hoping that other experimenters in this promising field may be prompted to give to the general profession the results of their efforts, and that in due time we shall not be, as now, literally without a literature on the subject.

Case VI.—Miss E. A. W——, aged thirty-one; superintendent of a fur manufactory, the confinement and dust of which is very irritating. Strumous habit, but family history negative. Is anæmic, despondent, and complains of a constant cough; areas of dulness over right lung, with persistent bronchial irritation and bronchial catarrh.

April 20th.—Placed this patient on a mixture of equal volumes of O, N_2O, and common air. Lung capacity but 130 cubic inches, although a woman of more than average stature and weight. Advised daily exercise in the open air and nutritious diet.

April 30th.—No apparent improvement; cough rather worse; expectoration very profuse, and sputa containing fetid cheesy (tubercular?) matter. Treatment continued.

May 10th.—Appetite rather better, and sleeps more regularly; otherwise no visible improvement. Cannot secure out-door exercise to any extent. Treatment changed to O two volumes, N_2O and atmospheric air, āā one volume. Lung capacity 150 cubic inches.

May 20th.—Lung begins to clear up, but no outward signs of improvement. Patient much discouraged, and only consents to continue the treatment on my positive assurance that she has made some progress. Lung capacity 160 cubic inches.

May 30th.—Now reports her general health as very decidedly improved; cough perceptibly better; her former sallow ("bilious") complexion has cleared up, and is now fairly ruddy. Eats and sleeps well, and enjoys a buoyancy of spirits unknown for years.

June 10th.—Reports herself "cured," and is loud in her praise of the treatment. Says she had no faith in it in the start. Her cough is almost entirely gone; respiratory murmur audible all over both lungs, and *has gained twenty pounds in flesh.* Lung capacity 195 cubic inches. Treatment discontinued, patient going to the country for a vacation.

August 8th.—She returns for additional treatment. Took a severe "cold" *en route* from the country, and her bronchial trouble returned. Severe passive congestion of both lungs, annoying cough with muco-purulent expectoration. Pulse, 94. At the first sitting she inhales two full inspirations of O one volume, N_2O one volume, and common air two volumes. Within five minutes her pulse falls to 84, and the immediate dyspnœa is decidedly relieved.

August 20th.—Some cough yet, but great general improvement is evident. Severe bronchial irritation persists, and, continuing the oxygen treatment, a local spray is added. ℞. Potas. chlor. ʒj. ad aqua ℥iv.; alternating every other day with ℞. Fl. ext. hyosc. ʒ ss. ad aqua ℥viij. per steam atomizer. Complains of pectoral and intercostal myalgia, for which ordered a stimulating lotion and tonic regimen.

August 29th.—Notable improvement is evident. Bronchial difficulty is much relieved; myalgia gone, and not much cough left. Treatment interrupted.

September 20th.—Treatment resumed every other day, improvement having continued since last record.

October 10th.—This patient now considers herself well, but is advised to leave the factory and live more out of doors, if possible.

Saw this patient six months later, and although she has not left the unwholesome factory she continues well.

Case VII.—L. P. N——, aged twenty-five; theological student; nervous temperament; family history good, but is a confirmed dyspeptic, and has spermatorrhœa of several years' standing, nocturnal emissions occurring almost every night. Over the latter he is despondent, even to desperation. Fears he is going into a "decline." Studies hard far into the night, preaches, becomes very excitable; after which he suffers from protracted insomnia. Has consulted a number of physicians here and elsewhere, but without benefit. Is now trying movement-cure, but thinks it weakens rather than strengthens him.

April 13th.—Begins the use of a mixture composed of O one volume, N_2O two volumes, and common air two volumes. Lung capacity 160 cubic inches; countenance expressing haggardness and hopelessness; urine loaded with oxalates.

April 20th.—Already reports a marked change in his appetite and digestion. Says his food no longer distresses him.

April 30th.—Nocturnal emissions have entirely ceased! He sleeps and eats well, and does not give way to excitement as formerly. Lung capacity increased to 190 cubic inches. Feels greatly encouraged.

May 10th.—Improvement has been constant and rapid since last report. Appetite and digestion excellent. Has gained in flesh, feels fresh and buoyant, and no return of emissions. In short, this patient is quite himself, and attributes the change wholly to the oxygen treatment. Lung capacity 200 cubic inches. No further treatment deemed necessary, and patient passed from observation.

Case VIII.—E. W——, aged forty-nine; insurance agent—one of the toughest of his kind! Could talk a graven image into taking a policy, if he had time. Mixes his family history so much with Farr's tables and the "actuaries' experience" that I cannot make much of it. Is suffering from a chronic "cold on his lungs," which I diagnose as bronchitis—sub-acute, with some pulmonary congestion. Has a very harassing cough, is quite dyspeptic, constipated bowels, harsh, dry skin, haggard appearance.

April 8th.—Placed him on the use, daily, of the standard admixture of equal volumes of O, N_2O, and common air. Lung capacity 150 cubic inches. Urine heavy with chlorides, etc.

April 16th.—Decidedly relieved; coughs less, raises more easily, sleeps and eats better. Treatment continued, increasing the proportion of O. Lung capacity 180 cubic inches.

April 25th.—Patient says he is pretty much "cured," and that the treatment has benefited his general health more than all the tonics, bitters, and "blood renewers" he has ever taken. Has a more natural appetite than for twenty years, and *is quite relieved of his habitual constipation.*

May 8th.—Reports himself "well;" no cough, respiration free and natural, all his bodily functions well performed.

Saw this patient six months later; no relapse.

Case IX.—Mrs. L. F. L——, aged forty-seven, married; one child, aged twenty. Family history shows rheumatism in her mother (arthritis, both sub-acute, and deformans), who is still living. Father dead. Brothers and sisters enjoy very fair health. Some twelve years ago had a miscarriage at three months, from which she made a poor recovery. Her account would indicate that the secundines were retained for several weeks, and finally expelled, with a spasmodic effort, and in a very fetid condition; pelvic cellulitis supervening and eventuating in chronic abscess (intra-pelvic), which four years ago found exit through a tortuous sinus and reached the surface in the right labia majora. Free incision was made, and the immediate or superficial abscess cavity was syringed repeatedly with tincture of iodine, carbolic acid, and glycerine. It healed but soon filled again, and a careful exploration with flexible probe proved its origin to be as above stated, the seat of the original abscess being, apparently, in the vicinity of the right ovary.

During the past three years patient has suffered from lumbo-sacral neuralgia and wandering arthritic pains. Six months since her neuralgia culminated in a painful and disabling sciatica of the left side. After exhausting all the domestic remedies to be had or heard of, trying salicylates, manaca, lotions, and anodynes without limit, she came to me in sheer desperation. I found her anæmic, suffering paroxysms of excruciating pain, which extended from the hip to the ankle; bowels constipated and moved only by enemas, dysuria a frequent symptom, appetite wanting, and much gastric distress accompanying the process of digestion. Tonics, iron, stimulants, counter-irritation, the deep injection of chloroform, and in some of the worst paroxysms, of morphia and atropia, as also the constant current, were all thoroughly tried, and afforded some temporary relief. However, these remedies severely aggravated her stomach troubles, inducing intense cephalalgia and almost unendurable nausea; and on omitting them the paroxysms returned with even greater severity.

As a last resort I advised a persistent trial of the oxygen treatment; and for the purpose of making the test a thorough one, took the patient into my own family. Her complexion is quite sallow, and skin, especially on her hands, covered with patches of "salt rheum," which has persisted for thirty years. She suffers from periodic attacks of rheumatic headache, and her countenance is a petrified epitome of seriousness and distress.

February 1st.—Prepared a mixture of O two volumes, N_2O two volumes, and diluted this with twenty per cent. of common air. Of this, two full inspirations to be taken at 10 A.M. and the same on retiring. Lung capacity 100 cubic inches. The first few doses of the mixture produced such complete muscular relaxation and semi-insensibility that she sank helplessly to the floor unless supported; no unpleasant sensations or effects supervening.

February 10th.—Sciatica still recurs, but less frequently and with less severity.

February 20th.—Appetite improves; complexion a little clearer; no dysuria except after the use of anodynes; discharge from the abscess less profuse and less fetid.

February 28th.—No further discharge from the abscess; digestion constantly improving; sciatica decidedly modified. Lung capacity 140 cubic inches.

March 5th.—Headaches less frequent and less severe; lameness almost wholly overcome; complexion rapidly improving. Patient eats, sleeps, and walks better, and shows a buoyancy of spirits unknown for years. Lung capacity 150 cubic inches. The treatment is continued with some interruptions, changing the proportions by adding twenty per cent. of common air and increasing to four full inspirations at each sitting, twice per diem.

March 12th.—Improvement steadily continues in all directions.

March 20th.—Is gaining flesh quite perceptibly, but *it is as much a gain of quality as quantity.* Paroxysms of headache rare and light; sciatica persists, but is mild. "*Salt rheum*" *gone; skin smooth as a child's.*

April 1st.—She declares she is ready to "certify" to any kind of statement I may ask as to the efficacy of the oxygen treatment. Avers that it has made her "a new woman," etc. Wants to go home. I express my conviction that the treatment should be continued much longer to ensure permanent results. She goes home, promising to return soon, especially if any old symptoms reappear.

April 24th.—Has worked considerably about the house and garden since last report. General health continues good, but sciatica returns in mild form. Again place her on four inspirations daily of equal volumes of O, N_2O, and common air. Lung capacity 200 cubic inches.

May 3d.—Steady improvement since last report. Sings with good voice, which she has not done for years; walks and rides without pain or extra fatigue; also does considerable light work about the house. Her complexion is now clear and fairly ruddy; headaches slight and infrequent. No sciatica, no eczema.

May 18th.—Treatment suspended. This patient has astonished her friends—*and her physician!*

September 15th.—Continues to this date free from all her former complications, with the exception of occasional disturbances of a physiologically weak heart. These are, however, chiefly or wholly attributable to her own indiscretion in the matter of over-exertion. She has attended to active household duties ever since treatment was suspended.

THE USE OF THE GREEN LEAVES OF THE DATURA STRAMONIUM IN THE CURE OF PAINFUL JOINT AFFECTIONS.

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It may seem unwise to speak of the use of a remedy that can be had only at one season of the year, yet such a remedy I have found so invaluable and wide in its range of usefulness that I am constrained to risk criticism by reporting the success I have had in the treatment of various painful joint affections with the green leaves of the datura stramonium. I have now under my care, in the wards of the Michigan College of Medicine Hospital, a young woman, aged twenty-two, who is recovering from an attack of acute rheumatic inflammation of the right knee-joint, that illustrates the advantage of treatment with the fresh stramonium leaves. She was attacked three months ago with rheumatism of wrist and ankle-joints upon opposite sides. Under treatment with salicylates the swelling disappeared from these joints and reappeared in the right knee, where it remained until I began the use of the leaves. In the meantime, blisters and iodine ointment externally, iodide of potash, colchicum, and alkalies internally were tried without avail. Large and frequently repeated doses of morphine were required at night to relieve pain and produce sleep. She began to enjoy freedom from pain, and to sleep, and the joint to improve, immediately the joints and parts contiguous were enveloped in layers three or four leaves deep of the freshly picked leaves of the datura stramonium—thornapple or Jamestown weed, as it is sometimes called. This application has been continued for two weeks. Internally she has taken infusion of quassia only. She has developed good appetite. The joint has become mobile and supple, and swelling is almost entirely gone.

A feeble, nervous boy, aged ten, had psoas abscess caused by carious dorsal vertebræ. He slept badly and cried and worried with pain in the hip and lumbar region.

Morphia internally interfered with digestion. His friends could not be prevailed upon to use it thoroughly by inunctions. I directed that a sufficient number of the fresh leaves of the stramonium be gathered daily from a neighboring vacant lot and applied to the hip and lumbar region, and held in place by a bandage. Freedom from pain was an almost immediate result.

I could mention numerous cases of acute inflammation of the large joints of the body where great pain, on attempting motion, was a prominent symptom that have occurred in my practice during the summer season. I have been in the habit of using the fresh stramonium leaves in these cases, and with the most happy results, so far as the relief of pain is concerned. In the season when it is impossible to obtain the fresh leaves I have tried, but without success, to obtain the same results by inunctions of stramonium ointment.

The plant from which the leaf is obtained is now so common in the United States that one need experience little difficulty in getting a sufficient number of the leaves fresh every day for use in any case of inflamed joint, where it is desirable to check pain and give physiological rest. It is my custom to keep the inflamed and painful joint enveloped in the leaves for a period of twenty-four hours, when fresh leaves are to be applied. In some instances I have used the bruised leaves in the form of paste or cold poultice, but do not think any particular advantage has resulted from this method of application. All that seems to be necessary to relieve the pain in an inflamed joint is to invest it with a layer of leaves thick enough to shut out the air, and prevent surface evaporation. Profuse perspiration from the skin over the joint follows, and pain and swelling usually vanish.

An experience of twelve summers with this remedy convinces me that with its help there is less frequent occasion to resort to the various immobilizing apparatus in the management of joint troubles than during the winter, when it is impossible to procure the fresh leaves, and that my summer cases make better recoveries —more useful joints—because of the greater opportunity given by the treatment without fixation apparatus for the exercise of the physiological conditions under which joints exist.

Progress of Medical Science.

Opium-smoking as a Therapeutic Measure.—Dr. Thudichum regards opium-smoking as a valuable remedy in colds, hay fever, chronic neuralgia, and hyperæsthesia, when these affections are rebellious to the action of quinine in large doses (*Schmidt's Jahrbücher*, No. 4, 1884). It is also useful in attacks of coughing in phthisical patients. The author thinks there is no danger of the patient becoming habituated to the practice, and says that those only who suffer from incurable affections are unable to cure themselves of the habit. The aqueous extract is used and the smoke is to be deeply inhaled. Dr. Thudichum regards the stories which have been told of the victims of opium-smoking as highly colored fables, but this is probably because he lacks experience, otherwise he would not so unhesitatingly recommend such a dangerous remedy.

Experimental Research Relating to the Etiology of Tuberculosis.—Geo. M. Sternberg, M.D., F.R.M.S., Major and Surgeon, U.S.A., in a paper read before the Section of Biology of the American Association for the Advancement of Science, stated that he had repeated Koch's inoculation experiments, and was able to confirm him as to the infectious nature of tuberculosis. Also as to the presence of the bacillus discovered by him, in tubercle nodules in the lungs and in tuberculous glands of inoculated rabbits and guinea-pigs (inoculated with sputum, containing the bacillus, from a phthisical patient). The experiments of Formad of Philadelphia, by which he claims to induce tuberculosis in rabbits by the introduction into the cavity of the abdomen of finely powdered inorganic material, have also been repeated with an entirely negative result, so far as the production of tuberculosis is concerned. The conclusion is therefore reached that the bacillus of Koch is an essential factor in the etiology of the infectious disease, tuberculosis.

Intermittent Fever Excited by Intestinal Worms.—Dr. Rousseau relates in *L'Union Médicale*, No. 30, 1884, the case of a young woman, nineteen years old, who was attacked with an intermittent fever of very severe type. The attacks recurred at frequent intervals for over a year, during which time the patient became emaciated and suffered severely in her general condition. Quinine and other antipyretics were tried repeatedly without effect. Finally several ascarides were passed, and an anthelmintic treatment being then ordered two hundred and twenty-nine worms were passed in four months. The intermittent attacks at once ceased and did not recur.

Paraldehyde as a Hypnotic.—Dr. C. Rank formulates the following conclusions based upon a number of experiments with this remedy: 1, On account of its unpleasant odor and burning taste, paraldehyde is unsuited for general use, especially in private practice; 2, in physical diseases it exerts no hypnotic effect, at most its action is only sedative; 3, paraldehyde is efficacious in nervous insomnia, in mental excitation, and especially in delirium tremens; 4, this drug cannot replace chloral or morphine, at least in the treatment of physical disorders.—*Deutsche Medicinal-Zeitung*, August 11, 1884.

Exanthem following the Use of Antipyrin.—Dr. Paul Ernst reports, in the *Centralblatt für Klinische Medicin* of August 16, 1884, two cases of an eruption caused by the internal administration of antipyrin. The two patients were a boy and a woman, aged respectively ten and sixty-seven years, yet the eruption was so nearly alike in both cases that there could be little doubt that the same cause was at work. The exanthem consisted of little irregularly rounded pimples lying close together, and in some places confluent so as to form patches of greater or less extent, between which the skin was normal, thus giving a marbled appearance to the surface. After about five days the eruption began to fade and to assume the character of a brownish pigmentation, and in the old woman there were some faint evidences of desquamation. Traces of the eruption were still visible at the end of two weeks. The exanthem was thickest over the body, and on the extremities the extensor surfaces were more covered than the flexor. In the boy there was some œdema of the face, but in neither case was there any eruption on the head or neck, although the palms of the hands and soles of the feet were not spared. There was some itching in the case of the woman, but the boy did not complain of this. The eruption ran its course and disappeared, although the administration of the antipyrin was not interrupted. The writer explains this by supposing that the system acquired a tolerance for the drug. On this account he advises a continuance of the remedy where its use is indicated, despite the eruption. In a postscript Dr. Ernst states that he has observed three other cases of an exactly similar nature.

Osmic Acid in Epilepsy.—Dr. Wildermuth has given osmic acid in a number of cases of epilepsy occurring in his practice during the past two years (*Centralblatt für Klinische Medicin*, August 16, 1884). It was given, in combination with potassium, in pills, containing each $\frac{1}{1000}$ grain of the salt. The largest amount given in one day was $\frac{1}{6}$ grain. He used it in ten inveterate cases, and saw no result in seven, in two the attacks were less frequent, and in one a prompt improvement and final cure was obtained. The drug caused no unpleasant symptoms of any kind.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE WAVE THEORY OF MENSTRUATION.

So rapid has been the progress of scientific investigation and destructive criticism that there is now no English or American text-book which presents correctly the state of scientific opinion regarding the physiology of menstruation. It is still generally stated that menstruation is a miniature pregnancy, in which there is a disintegration and throwing off of the mucous membrane. It is known now, however, that such statements do not express the truth, but that the denudation is only partial, and that the blood escapes mainly by diapedesis and by rupture of engorged vessels. This view, that the uterine mucous membrane is characterized by a monthly "deciduosity," has been laid aside.

In the same way the old theory of Pflüger, that menstruation and ovulation were almost, if not quite inseparable phenomena, the irritation of a ripened follicle exciting reflexly uterine congestion, has also been disproved. The fact that after removal of the ovaries menstruation may continue, furnished a sufficient refutation of this previously very satisfactory explanation of the menstrual process.

If, however, it be true that menstruation invariably ceases after removal of the Fallopian tubes, some ingenious person may yet be able to rehabilitate in a measure the reflex hypothesis of Pflüger.

At the meeting of the German Naturalists and Physicians in Freiburg, February, 1883, Professor Hegar reviewed and showed the insufficiency of the various theories of menstruation. Since that time Arthur Farre and Leopold (*Archiv f. Gynecologie*, Bd. xxi.) have contributed further evidence as to the independence of ovulation and menstruation.

In a recent issue of Volkmann's *Klinischer Vorträge* (No. 243), Dr. Carl Reinl, a pupil of Hegar, discusses the theories of menstruation, and contributes the results of some careful experiments relating to what may be called the wave theory of menstruation.

Professor Goodman, of Louisville, some six years ago, advanced the theory that the vital activity of woman ebbed and flowed rhythmically, the length of the wave being the duration of a menstrual epoch. Various investigators (Putnam-Jacobi, Stephenson, Rabuteau, Hennig, and Von Ott) have contributed some facts which apparently show that just before menstruation the vital powers of woman are at the highest, and that with the appearance of the menses there is a gradual fall, with, in some cases, a secondary rise.

The measures of this alleged increased vitality have been the state of the heart circulation, the temperature, and the excretion of urea. It has generally been found that the temperature has been higher, the blood-pressure greater, and the excretion of urea larger in amount before menstruation than during or directly after it.

Reinl's observations cover the subject of the relation of the heat production to the menstrual epoch. Records were made of the temperature in eighteen cases. Eight of these were healthy women; on three ovariotomy or oöphorectomy had been performed, while the remainder had some form of uterine or ovarian trouble. In the healthy patients he established the existence of a temperature curve, which reaches its highest point just previous to menstruation; it then gradually falls during menstruation, and for some days thereafter. In a certain proportion of cases during the first half of the intermenstrual period it falls below the normal.

In the pathological cases Reinl still found marked evidences of the temperature wave. Even when menstruation occurred every two or three weeks the appearances of menstruation corresponded with the top of the curve. Perhaps the most significant fact, however, was that in the castrated women, when no menstruation occurred, the form of a periodically returning temperature wave could still be made out.

The observations which have thus apparently established the fact of a menstrual wave are most interesting and not without practical significance. It will still be questioned, however, whether because the pulse is harder, the skin hotter, and the urea excreted greater, therefore the vital powers are above their average of activity.

MALARIA AS A DEFENCE IN A SUIT TO RECOVER RENT.

THE defence of poor plumbing to a suit to collect rent is a common one, and it often seems to be the opinion that defects of this kind causing sickness are sufficient in law to prevent a recovery on the part of the landlord.

So generally is this defence brought forward, that it shows there is a deep-seated idea that this is an exception to the ordinary rule of contracts. There may be defects in the roof, or the furniture may not be up to the standard promised by the landlord, but such defences are not often urged in a suit for rent. It is only when malaria shows itself that the tenant feels himself justified in leaving the house or in refusing to pay his rent.

There seems to be no reason, however, for this general belief in the power of malaria to change the settled rules of law. When a man hires a house and examines it, he cannot, in general, refuse to pay rent because malaria then existed or is afterward produced because of poor plumbing. He takes the house as it is, and while he may be unfortunate in his selection, he will not be allowed to leave, and certainly there is no rule of law which will allow him to continue in the house and yet refuse to pay rent.

In the case where there is a positive guarantee on the part of the landlord that the plumbing is in good order and no malaria exists, there seems to be a little confusion in the decisions, but the general opinion is, that if,

notwithstanding the guarantee, the tenant examines the house and is apparently satisfied by accepting the lease, he cannot afterward refuse to pay rent. In case the tenant relies on the landlord's statements and makes no examination of the condition of the house, the decisions are in favor of allowing him to leave the house, and no rent can be recovered.

An interesting case was decided not long since in this city which seems to give the tenant rights under the Health laws to leave his house and refuse to pay rent. The following is the statement of the case: "In a suit for rent claimed to be due from a tenant of a suite of rooms in an apartment house, it appeared that the defendant's wife and servants were taken sick by inhaling a malarial or poisonous gas in the apartments occupied by them; that this unhealthy condition of the apartments was owing to the defective condition of the general plumbing work of the house, of which the landlord was notified by orders received from the Board of Health, requiring him to have changes made in the plumbing work, and which unhealthy condition could have been removed if he had complied with those orders; that the defendant waited for two weeks, and finding that nothing was done on the part of the landlord, left under the apprehension that he was imperilling the health of himself and family by remaining." Under these circumstances, the judge who tried the case decided that this was what is called in law a constructive eviction, and the tenant could not be forced to pay rent during that portion of his lease subsequent to the removal.

The decision has recently been affirmed by the General Term of the Court of Common Pleas, and unless reversed by the Court of Appeals, which is unlikely, will be the law in the future. It may be said in general that the policy of the law is becoming more favorable to tenants in some particulars, but the main principles of contract law will always apply to leases.

WHEN SHOULD POISON LABELS BE USED?

A CASE has recently occurred in Philadelphia which raises a nice question as to what prescriptions should be labelled "Poison." The Pennsylvania statute, and that of almost every other State, is to the effect that "No apothecary, druggist, or other person, shall sell, . . . by retail, any morphia, strychnia, . . . except upon the prescription of a physician or on the personal application, . . . and in all cases of such sales the word 'Poison' shall be carefully and legibly marked or placed upon the label," etc.

In the case referred to a physician ordered pills containing one-twentieth of a grain of strychnia for a patient; a number of persons (not previously adjudged lunatics) believing that such diminutive pills could contain nothing prejudicial to health, undertook to see who could swallow most of them in a given time. The youngest of the party took fourteen, representing seven-tenths of a grain, and died. The erudite coroner, after holding an inquest of great length, has instructed his jury to find the dispensing clerk responsible for the death of the girl in not labelling the pill-box "Poison."

Aside from the fact that from the manner in which the case has been conducted, it looks very like a case of libel, the question arises, Are all prescriptions containing a poison to be labelled "Poison"? or shall only those prescriptions containing the drugs mentioned in the statute be labelled as poison? The statute in the Pennsylvania books is clearly deficient, as it only includes morphia, strychnia, arsenic, prussic acid, and corrosive sublimate. Certainly it would be absurd to require the apothecary to label pills containing one-twentieth of a grain of strychnia "Poison," and at the same time allow him to sell an ounce of tartar emetic or one grain of atropine to any person without the cautionary label. Yet this is clearly what the law would allow, and we do not see how he could be prosecuted for it. But it is equally absurd to require him to put the poison-label on every prescription containing a poison; for in this case it would be the exception when a prescription would not be labelled as poisonous. Brown-Séquard's neuralgic pills, Dalby's carminative, Mitchell's tonic pills, Dover's powder, and fully one-half of the prescriptions sent out by physicians would be illustrated with the skull and cross-bones. Such is clearly not the purpose of the law, and it would be not only absurd but puerile, especially when pills are dispensed, as no one could take two pills by mistake for one; and though the law has a good deal of presumption, it has no right to presume that the physician is prescribing for a patient whose friends are without proper mental balance. Had the prescription in question called for gr. v. of strychnia, and f℥ xiiss. of water, in teaspoonful doses, the druggist would very properly, as he says, have labelled it as poisonous, because a careless person might take a tablespoonful of it, or else, as many people do, might turn the bottle up to the mouth and guess that the proper amount had been swallowed. As an example of the absurdity to which this hair-splitting construction of the law would be reduced, the druggist in question gives the following, taken from his file: "Eight suppositories, each containing half a grain of aqueous extract of opium. Use one" (here the opium contains morphia, and the label must be used); and adds, "If some lunatics will banter each other as to how many of these they can insert into their respective rectums, they will also be subjects for inquest." But the manifest absurdity of the coroner's construction is still further seen when it is remembered that scores of patent medicines are sold without the poison-label; in fact, we do not remember ever to have seen such a label on a patent-medicine bottle. Yet we have known a woman to die within two minutes after taking a triple dose of a patent cough-mixture, without previously shaking the bottle. Nor have paregoric or any of the many soothing syrups cautionary labels. The Philadelphia coroner may not be much of a mathematician, but he has evidently not forgotten the *reductio ad absurdum*.

MULLEIN LEAVES IN PHTHISIS.

AT the late meeting of the International Medical Congress at Copenhagen, Dr. Quinlan, of Dublin, read a paper in which he advocated the employ of mullein leaves in phthisis, claiming extraordinary success in the treatment of this disease by the free use of a decoction in milk of this plant, or rather *weed*, for it is one of the most common of our native weeds, growing by the roadside and in

neglected fields. Mullein is known to botanists as the verbascum thapsus, and has honorable mention in the Codex of France under the name of *Molène, bouillon blanc;* entering into the composition of the *quatre fleurs pectorales*. The mode of preparation is to infuse an ounce of the dried leaves, or the equivalent of the fresh, in a pint of milk, to boil for ten minutes, and then to strain. This infusion is administered warm to the patient, with or without a little sugar. The whole pint is given in two doses during the twenty-four hours. The hot decoction is said to be very easing to consumptive coughs, so that during its use the ordinary cough mixtures may be dispensed with. Its power of checking phthisical looseness of the bowels is said to be very marked. In early cases, according to Dr. Quinlan, the mullein milk appears to act very much in the same manner as cod-liver oil, than which it is much more palatable. A large number of cases of pulmonary consumption have been treated in St. Vincent Hospital, Dublin, exclusively on mullein, and it is said that crowds of patients have been attracted to this hospital by the wonderful results which have been obtained from this singularly simple treatment. In phthisical coughs great relief is said to follow smoking dried mullein leaves in the same manner as tobacco. Dr. Quinlan showed at the meeting of the Congress cigarettes made of mullein leaves, which are said to be very pleasant to smoke. It is asserted that in pretubercular and early cases of pulmonary consumption mullein appears to have a distinct weight-increasing power, and to be an excellent palliative to the cough in the later stages, besides being the very best remedy to antagonize looseness of the bowels.

Wood, in the U. S. Dispensatory, speaks of mullein leaves as "demulcent and emollient," and as reputed to possess "anodyne properties which render them useful in pectoral complaints."

THE NEXT MEETING OF THE INTERNATIONAL MEDICAL CONGRESS.

It is a matter of gratification and pride that the International Medical Congress has decided to hold its next meeting in this country. The American profession, however, cannot too soon be made to feel that it has accepted no small responsibility, and that it must put forth especial effort in order to acquit itself well. So far as American hospitality and the ability generously to offer it are concerned we have little to fear. But that the literary and scientific contributions come up to the high standard heretofore observed in these Congresses is a matter of more concern. Unquestionably American physicians can respond successfully in this direction if the effort is made, as there is little doubt will be the case. We trust that our readers will begin at once to consider whether they wish to take part in the Congress, and if so, to see that they bring to it something worthy of the occasion. Three years is none too long to expend in such preparation.

Naturally, the character of the papers read at the Congress in question will depend greatly upon the judicious work of the organizing committee. There should be no effort spared to get our most representative men and no ill-timed charity in selecting the wheat from the great amount of chaff that will surely be offered. No papers sho ild be accepted that do not bear the stamp of originality and merit.

Some practical difficulties will, we fear, be met with by reason of the climate of Washington, where the Congress is to be held. In July and August the heat is liable to be intense, and to unfit even the most enthusiastic for scientific work or social enjoyment. It would be impossible probably to get many European physicians from their work so early as May or June. In September there might perhaps be cooler weather.

Still we do not think that climatic objections will be insuperable, especially since the hotel accommodations in Washington are so ample, and the Potomac has almost always a cool breeze. Three years from now, however, we shall advise our prospective European visitors to bring the lightest clothes and to be prepared for the most liberal diaphoretic activity.

THE GROSS MEMORIAL AGAIN.

The sting of death is sometimes in the imbecility of posthumous admirers. The *Chicago Medical Journal and Examiner* has made a surprising display of unpleasant feeling as regards the position of The Record toward the proposed Gross Memorial Professorship. We have not seen so near an approach to billingsgate in a medical journal for a long time.

We confess that we do not understand the cause of the *Journal's* outburst. We honor the memory of the late Dr. Gross; we urge that his memory have a fit memorial. His is the greatest name in American surgery; we protest against its being buried in a "memorial professorship" in a private (as distinguished from a State) medical school. Medical history furnishes no such project as that which is now being set before us. We advise against it because the plan is unwise and will not arouse the sympathy of the profession. We urge in its place that there be founded a memorial laboratory or a lectureship similar to those by which celebrated physicians of London have been honored. Every doctor in the country, with a spark of generosity in him, will gladly forward such a plan, and it will succeed. But to set up as a memorial to a great man a didactic professorship for the yearly benefit, not of doctors, but of students, a commonplace, utterly local and never-to-be-forgotten investment is ridiculous!

The *Journal* is mistaken in arguing with so much point and courtesy that The Record is "untruthful," "jealous," "spiteful," and "sordid." It is simply a question of properly and successfully rendering homage to a distinguished name. We believe thoroughly that Jefferson Medical College took up the matter in good faith and in perfect unselfishness. We do say, however, that it was not only unwise but in bad taste for it to organize a scheme which will help itself as much as it honors Gross. We have the "effrontery" still to reiterate that the above expresses the views of most of the profession.

If the *Journal* still believes that our interpretation of the general feeling is not correct, we refer its editor to *Gaillard's Medical Journal*, the *Medical Age*, the *Detroit Lancet*, the *Cincinnati Lancet and Clinic*, the *Indiana Medical Monthly*, the *Peoria Medical Monthly*, with other journals yet to come.

It is said that Lord North's third wife was of so inflammable a temperament that for three days before the wedding she had to be kept packed in ice. We would in all courtesy suggest that a similar course would be advisable for the editor of our valued contemporary previous to his ventures in polemics. Being cooled to below the point of unmannerly vituperation, he may see that possibly all is not guile in New York, and that we may be quite sincere in urging the views we have presented.

We certainly trust that there will be no quarrel over the matter. It would require very little change to secure perfect unanimity in working for the honor of the lamented Gross.

As bearing upon the general question, we append the following from a well-known Jefferson Alumnus in the western part of this State. The writer puts the case with fairness, and is responsible for his facts:

Your views on the subject of the proposed memorial to the late Professor Gross meet with a hearty response from many of the alumni of Jefferson Medical College. As a member of the Auxiliary Committee, appointed to solicit contributions, I find that most of the old "Jeff." men whom I approach are unwilling to help in any movement which will, at the expense of the alumni, only give another prize to be electioneered for in the Board of Trustees of the College. All old Jefferson men know what a close corporation said Board is, and when they remember that neither Professor Pancoast nor Professor Gross, out of their large estates, left a cent to the school which so long honored them, it would seem that these great men saw nothing in the spirit which animates the Trustees to warrant giving them the disposal of any endowed chairs. The last three appointments to professorships in Jefferson were made notoriously for the following objects—first to conciliate Philadelphia society, and, second, to draw students from the West. It is high time that the alumni of a college, who in after life do so much for its benefit, should have some voice in the management. Let the Alumni Association have the election of one-half the Board of Trustees, or a confirmatory vote on professional appointments, or the nomination to the Trustees of names to fill vacancies in the teaching body, if they are to be expected to aid the College in the means for higher education. I am as fond of my alma mater as the next man, and look with pride at the signatures on my diploma, but I cannot avoid the chagrin which comes over me every year as I peruse the annual announcement, and see the miserable subterfuges which are inserted therein to appease the clamor for higher standards and yet avoid any rock which will lower the fees of the Faculty. Such an instance is found in the last announcement, in which the preliminary examination required by the laws of certain States is offered only to those who intend to locate in those States, instead of being required of all students. The *auri sacra fames* has its seats in the councils of all our educational institutions, but the alumni of Jefferson will not, as a body, respond to that thirst until a change comes over the spirit of those who control its affairs.

A JEFFERSON MAN.

THE FORT PLAIN FASTING GIRL.—Dr. Darwin Potter, of Fort Plain, N. Y., has examined the alleged fasting girl of that place. He finds the case to be one of very much the kind we had stated. The claim to having fasted for one hundred and eighty-eight days is made preposterous by the girl's well-nourished state. She has chorea, and is, as we suggested, undoubtedly hysterical.

News of the Week.

THE RHINELANDER CASE.—The recent investigation into the mental condition of William C. Rhinelander by a commission appointed by the Court of General Sessions has attracted a great deal of attention on the part of the community at large. It was begun for the purpose of enabling Recorder Smyth to decide whether Rhinelander should be called upon to plead to an indictment for assault upon John Drake, a lawyer of this city. It was alleged that Rhinelander was insane and more fit for an asylum than a trial in a court of law. The investigation continued for a number of weeks during the summer before the commission, consisting of Drs. Detmold and Nolan and Edward Patterson, a lawyer. The testimony was conflicting and Rhinelander vigorously contested the idea that he was insane, claiming that he desired and ought to have a criminal trial. The commission have just reported to the Recorder, Drs. Detmold and Nolan holding that he is insane, and Mr. Patterson that he is not. Under the law the Recorder can adopt either report he chooses, and he is now engaged in examining the voluminous testimony produced, in order to arrive at some conclusion.

THE DEATH OF DR. ROBERT J. HEINMÜLLER.—At a special meeting of the members of the Fourth Division of the Health Department of the City of New York, held September 2, 1884, the following resolutions were adopted:

Whereas, We have learned with deep sorrow and regret of the death of our late colleague, Dr. Robert J. Heinmüller; therefore, be it

Resolved, That in the death of Dr. Heinmüller, this Department has lost one of its most faithful and efficient officers, and we, his associates, a friend whose many noble qualities of mind and heart had endeared him to each and all of us; and the profession has lost one of its most promising young members.

That we tender to the family of the deceased our deepest sympathy in their great bereavement.

That a copy of the proceedings of this meeting be sent to the family, and to the medical journals for publication.

J. B. TAYLOR, M.D.,
J. B. LENEHAN, M.D.,
GEORGE S. CONANT, M.D.,
J. N. MCCHESVEY, M.D.,
J. C. CONOVER, M.D.,
Committee.

THE CHOLERA.—On September 14th, the cholera at Naples showed evident signs of abating. On the 16th, there were only 470 new cases and 167 deaths. The total number of deaths at Naples, up to the day mentioned, is estimated to be about 3,700. This would represent between eight and nine thousand cases, since the mortality has been, on the whole, rather below its average. In other parts of Italy the cholera continues to keep its hold, but makes no alarming progress. Reports are sent in from thirteen different provinces, but the total number of cases ranges between one and two hundred, with a mortality considerably less than fifty per cent.

In France there continues to be occasional sporadic

outbreaks. Some cases are still reported from Toulon and Marseilles. In the Eastern Pyrenees there are forty-seven places where the disease has appeared. In all France it is estimated that there have been 5,200 deaths in 207 cities and villages.

Cholera is reported from half a dozen Spanish towns, but in none of them has the disease made great ravages, if we may trust reports. At date of writing, indeed, there have not been 200 deaths from cholera in all Spain. On the whole, the epidemic appears to have spent its force. We may estimate that it will leave with a record of 10,000 deaths and two or three times as many cases of sickness.

The Academie de Medicine, of Paris, has appointed a cholera commission, consisting of MM. Brouardel, Marey, Rochard, Proust, de Mussey, Fauvel, Legouest, and Besnier.

Protesting against Compulsory Vaccination.—A despatch says that over 3,000 people at Leicester, England, have been summoned for defying the vaccination law, the feeling against which is very bitter all over England.

Giving Commissions on Dental Patients.—We are not aware that there is an Odontological Code of Ethics, written or unwritten. But whether there is or not, there ought to be some moral prohibition put upon the practice by certain dentists of offering a percentage on all patients sent. The practice seems to be to circulate cards among physicians announcing that "we allow you twenty-five per cent. of all money received from patients whom you send us."

The English Army Surgeons, about two thousand in number, are to change their uniform from scarlet to blue.

A Testimonial to Dr. H. D. Schmidt.—We learn from the New Orleans *Medical and Surgical Journal* that the friends of the eminent pathologist, Dr. H. D. Schmidt, have organized for the purpose of procuring and presenting a testimonial portrait of him to Charity Hospital. The presentation was to have been made the first Monday in September. Dr. Schmidt is *facile princeps* the pathologist of the South, and deserves this act of appreciation from the profession.

The Will of the Late Dr. John G. Adams.—Dr. Adams, by his will, bequeaths $5,000 to the Presbyterian Hospital for a free bed for the sick poor of the Fifth Avenue Brick Church; $2,500 to the Bridgeport Protestant Orphan Asylum and Hospital; $500 each to the Physicians' Mutual Aid Association and the New York Training School for Nurses. His medical library is bequeathed to the New York Academy of Medicine. Dr. Adams revokes in a codicil a bequest of $5,000 to the New York Academy of Medicine.

Cholera and Tobacco.—There seems to be a belief, among the newspaper section of the city at least, that tobacco has some prophylactic power against cholera. The *Times* correspondent who visited Toulon and Marseilles kept tobacco in his mouth while in the infected districts and hospitals. Mr. George Augustus Sala has asserted that in past epidemics tobacco-smokers have had some exemption from the disease. Now experience has shown that acid solutions prevent the development of the cholera germ, and that this organism cannot easily pass through an acid stomach into the intestine. But the use of tobacco promotes a flow of alkaline saliva which is swallowed, thus preparing a flowery path for the bacillus to enter.

Prof. Mallet, M.D., LL.D., Ph.D., has been appointed to the chair of Chemistry in Jefferson College, as successor to the late Professor Rogers. The school, in selecting Dr. Mallet, has successfully pursued its policy of taking the best men obtainable for its professorships.

Trouble among the Homœopaths at Washington, D. C.—The homœopaths, or at least certain persons practising under that trade-mark in Washington, D. C., are complaining that the trustees of the Garfield Memorial Hospital give them no share in its management. To offset this, the managers of the "National Homœopathic Hospital" (that is to be) have issued an appeal to the homœopathic societies throughout the country to assist in a grand national fair to be held in Washington in December next.

A Homœopathic Fraud Exposed.—While on the subject of homœopathy, it may be of interest to note the following case of poisoning recently reported in the *Australasian Medical Gazette*: "A homœopathic practitioner named Günst was called in to attend a young woman suffering from sleeplessness and neuralgia, for which he prescribed morphia and quinine. His explanation is that by some bungling in the use of Hahnemannic symbols, the powder ordered actually contained ten grains of hydrochlorate of morphia and five grains of quinine, and as the directions given to the patient had been to take the powder at once, the unfortunate woman was killed. This accident of the poisoning, however, is not the main point of interest now. In the evidence given by Dr. Günst at the inquest, he explained that what he intended to order was half a grain of morphia, and this admission at once puts the treatment out of the compass of homœopathy."

The Code of the Nebraska Doctor.—The Omaha doctors are being greatly slandered or they are in a bad way. A correspondent from that city asserts that the code of ethics is "Every man for himself and the devil take the hindermost." This code is recommended, however, by a Western exchange as being devoid of all possible hypocrisy at least.

The Missouri State Medical Society is accused, like the New York Society, of being overrun with specialism. There is fault on both sides. Papers are wanted, and specialists generally are the most ready to write. Let the general practitioner assert himself, therefore, but also let the organizing committees help him a little more than is now the case.

Pasteur in Wax.—A foreign exchange states that there has been placed in the Musée Grévin a representation in wax of Pasteur, with his assistants engaged in the act of inoculating a dog against rabies. Wax works have become the modern barometers of fame.

The Important Fact is being circulated that Mr. Blaine is homœopathic in his medical beliefs. However this may be, he seems a big pill to some people.

Excision of the Pylorus for Malignant Disease was performed by Dr. Randolph Winslow, of Baltimore, recently at the University Hospital. The patient was a woman, forty-two years of age, who had suffered for over a year and was much emaciated. She died of shock a few hours after the operation. So far as we can learn, this is the second operation of the kind in this country. Both have been unsuccessful.

Doctors in Denver.—The *Denver Medical Times* says, that about twenty new doctors have located in Denver within the past three months. The ratio of doctor to inhabitant now is one to two hundred and fifty. Denver has also one medical college, twenty-five to thirty professors, and five or six hospitals.

Reports of Societies.

MEDICAL SOCIETY OF VIRGINIA.

Fifteenth Annual Session, held at Rawley Springs, Va., September 9, 10, and 11, 1884.

(Special Report for The Medical Record.)

Tuesday, September 9th—First Day.

The fifteenth annual session of the Medical Society of Virginia convened in the main room of the hotel at Rawley Springs, Rockingham County, Va., at eight o'clock on Tuesday evening, September 9th, the President, Dr. J. Edgar Chancellor, of Charlottesville, in the chair.

The meeting was opened with prayer by Rev. Dr. Robert C. Mattlack, of Philadelphia.

Dr. M. G. Ellzey, of Washington, D. C., in behalf of the management of the Springs, delivered an address of welcome, in the course of which he warmly greeted the delegates, and referred to the fact that the doctors of Virginia could better recommend to their patients the mineral waters of the State after personal inspection of them at the native springs.

Dr. J. E. Chancellor, President, for the Society, made a few appropriate remarks in reply, and in behalf of the members present thanked the Springs management for the hospitable welcome they had already received.

Dr. Robert I. Hicks, of Fauquier County, then read the address to the public and the profession, entitled

HYGIENE IN RELATION TO THE PRIVATE FAMILY.

He began by showing the important relations existing between individual sanitation and the public health. He briefly described the investigations of Pasteur, Koch, and Devaine, in connection with the germ theory, explaining the microbes, bacilli vibrios, and spores found by these observers in different forms of disease, and warned his hearers not to be too ready of belief as to these micro-organisms producing disease, as they may be simply accompanying the disorders in question. After this question is fairly settled, there yet remains the most important thing to be done, *i.e.*, how to best destroy them. He enumerated the different hiding-places of these germs, and showed that by destroying the conditions that make and support them we can in that way do best in practical hygiene. He said that while these agents do exist, and their existence is as yet unavoidable, it is a further fact that we are responsible for them to a much greater extent than we are willing to admit. Many are chargeable to ignorance and recklessness. He showed how some of the preventable diseases are produced simply from people not having a knowledge of the primitive points of practical hygiene. Public legislation, while in every way desirable, can do little else than establish general quarantine laws against the great plagues, but, except in a general way, it cannot enter into the private house, it cannot reform the domestic habits, it cannot enforce purity in a private well, and as these things involve the life and health of the family, they must be attended to from within. As nations are but aggregations of individuals, as is the individual so is the nation. Toulon and Marseilles are now paying the terrible penalty of individual uncleanliness.

The happiness, longevity, and often the success itself of man, is largely dependent upon an intelligent recognition of the laws of health. Misery, disease, and failure in life are the penalties paid for their violation. Penalties extending beyond one generation are frequently the result of personal neglect. Our present knowledge of pathology shows us that diseases are often perverted life processes, and are therefore more easily prevented than stamped out when once begun.

Dr. Hicks showed a firm belief in the preventability of consumption, and did not think it hereditary to anything like the commonly accepted extent. Out of one hundred cases in New York only twenty-six per cent. were hereditary, the remainder (seventy-four per cent.) are charged to damp air, insufficient food, poverty, and filth. He wished to impress upon his hearers the fact that tubercle is not a new formation dependent upon hereditary taint, but is merely an alteration of normal nutrition, a degraded tissue resulting from neglect of trivial complaints in connection with a disregard of ordinary sanitation. He illustrated these and other points by cases drawn from his private practice. He classed Bright's disease, dyspepsia, gout, etc., as preventable diseases, due frequently to personal habits. No organ can continue sound and be the constant carrier of morbid products. The remedy for this class of complaints consists in change of habits, moderation, etc. The subject of the location of the family house and its bearing upon the health of its inmates was taken up and carefully discussed, the point being also illustrated by cases under his own observation. He pronounced pure air antiseptic, showing, by well-chosen illustrations, its influence on animal life. He thought that from 1,200 to 2,000 cubic feet of air must pass through a room every two or three hours to make it healthy for one individual. The addition of one other person impairs its purity and renders it unfit for use. It becomes not only unhealthy but unclean. He took up the subject of ventilation, and gave some practical hints regarding it. He called the attention of his hearers to the fact that dry heat was the only perfect disinfectant, extreme cold having failed in that direction in many instances. The importance of light, both to the well and sick, was touched upon, and practical examples were given from his own observation. He then showed, from cases in his own practice, how typhoid fever, diphtheria, and some other diseases were often caused by the presence of old rubbish, bad water, and filth. He believed that certainly in decaying animal matter, and probably also in decaying vegetable matter, are found the germs that produce zymotic diseases. The thorough destruction of these matters insures the destruction of the germs. As one person, by bad personal habits, may not only produce disease in himself but pass it on to others, the innocent suffering with the guilty, each individual should feel the great responsibility resting upon himself. He concluded by showing the economical side of the sanitary question, proving how much could be saved by personal attention to the first principles of hygiene, and demanded a higher grade of education for the children of to-day in matters pertaining to individual and home sanitation.

At the conclusion of Dr. Hicks' address the Secretary read the names of forty-four physicians who applied for admission into the Society. By vote the list was referred to the proper committee.

THE SERIOUS ILLNESS OF HONORARY FELLOW DR. R. S. PAYNE,

of Lynchburg, having been announced by a member, the Secretary was directed to telegraph to him the

resolutions of sympathy adopted by the unanimous vote of the Society.

The nomination and election of officers of the Association were then taken up.

The evening session was devoted to a consideration of

THE PHYSICIANS TO BE APPOINTED UPON THE BOARD OF MEDICAL EXAMINERS.

The State is divided into ten congressional districts and the bill provides that the State Medical Society shall nominate three men from each district, and two from the State at large. These names will be presented to the Governor, and, if satisfactory to him, the physicians named will constitute a Board for the examination of every doctor who desires to practise medicine in Virginia after January 1, 1885. The following named gentlemen were selected by the Society as

EXAMINERS.

From the State at large—Drs. William C. Dabney, of Charlottesville, and F. D. Cunningham, of Richmond, were unanimously elected. First Congressional district—Drs. W. W. Douglas, of Richmond County, O. B. Finney, of Accomac County, and S. W. Carmichael, of Spottsylvania County. Second district—Drs. Thomas B. Ward, of Norfolk, L. Lankfold, of Southampton County, and Jesse H. Peek, of Hampton. Third district—Drs. R. Lewis, of Richmond, C. R. Cullen, of Hanover County, and O. Crenshaw, of Richmond. Fourth district—Drs. Hugh Stockdell and J. H. Claiborne, of Petersburg, and Dr. William J. Harris, of Black's and White's, Nottaway County. Fifth district—Drs. Rawley Martin, of Pittsylvania County, William L. Robinson, of Danville, and T. B. Greer, of Franklin County. Sixth district—Drs. H. Gray Latham, of Lynchburg, Harvey Black, of Blacksburg, and Oscar Wiley, of Roanoke County. Seventh district—Drs. William P. McGuire, of Winchester, J. H. Neff, of Rockingham County, and Hugh T. Nelson, of Albemarle County. Eighth district—Drs. Alexander Harris, of Jeffersonton, C. C. Conway, of Orange County, and Bedford Brown, of Alexandria. Ninth district—Drs. S. W. Dickinson and R. D. Huffard, of Smyth County, and Robert J. Preston, of Washington County. Tenth district—Drs. Merriwether, of Amherst County, Z. G. Walker, of Rockbridge County, and H. Patterson, of Highland County.

WEDNESDAY, SEPTEMBER 10TH—SECOND DAY.

DR. WILLIAM C. DABNEY, of Charlottesville, as chairman, read the

REPORT OF THE COMMITTEE ON MEDICAL LEGISLATION,

in the course of which he referred to the work done during the meetings of the Legislature in the past few years, closing with showing the success the committee met with in the last legislature, an act providing for a Board of Medical Examiners having been then passed. Although the bill finally passed was not exactly what the profession desired, still it was far in advance of no act at all for the protection of the people of the State. The committee was discharged with the full thanks of the Society.

DR. L. B. EDWARDS, of Richmond, then read for DR. H. T. NELSON, of Charlottesville, the report on

ADVANCES IN ANATOMY AND PHYSIOLOGY,

and after making excellent references to what had been done in this line in the past few years, he began his report by showing the newer discovered morphological components of the blood, and referred to the late examinations of this fluid made by German and Italian scientists, mentioning their beliefs in thrombosis, etc.

The next subject taken up was the physiology of digestion, and the writer spoke of the newer theories concerning peptones. All the tissues of the body contain some digestive power, according to one observer. Albumen and peptone are identical, if we are to believe some authorities. According to Dr. Frank, of New York, animals fed on peptones were nourished in the same manner as if fed on albumen. The favorable views of Dr. Jacobi on peptone feeding were quoted with great praise. The subject of the intracranial nerve-system was taken up, and the writer confined his remarks mainly to the sensory portion of the encephalon, taking occasion to remark that there had not recently appeared any additions to our existing knowledge of the cerebral motor centres and their connections. He closed by expressing the hope that his paper might have some practical bearing upon alimentation in disease, and might encourage more general study of cerebral pathology, a more perfect knowledge of which must ultimately increase the longevity of our race.

THE PRESIDENT, Dr. J. E. CHANCELLOR, then delivered his annual address, taking as his subject

A BRIEF REVIEW OF THE ORIGIN AND HISTORY OF MEDICINE.

After a few introductory remarks he began by congratulating the Society upon the great and growing interest so evidently manifested in the yearly meetings, as evidenced by the large attendance last year, and the still larger attendance of members this year, about one hundred and twenty-five being present. The character of the papers presented had also improved of late years. He mentioned especially the great work done by the Society members, in securing, since the last session, a partial recognition of the rights of the profession, by Legislative enactment, in the passage of the Anatomy Bill and the act establishing a State Board of Medical Examiners, but also said that, gratifying as this fact may be, there yet remains much to be done by the proper authorities. With his words of greeting he said was mingled the always sad duty of presenting to the Society the tidings of the work of death among the membership during the past year. It had seemed to have been a year of unusual mortality, among the elder members especially. Six or eight of the charter members have died since the last meeting, and several of the younger Fellows. Three of those taken from the Society's work were ex-presidents, and one a distinguished professor in the Medical College of Virginia. The speaker paid a brief tribute to the memories of the departed members, and referred in touching terms to the memory of our beloved Honorary Fellow, Dr. J. Marion Sims, calling him the Moses of our profession, as well as the father of gynecology in America.

He then passed to the consideration of his subject proper, saying that the central and all-absorbing thought of the world of medicine was *progress—scientific progress*, the development of a more advanced medical education, and a higher standard for graduation. The advance in medical science has been so rapid, and the glamour thrown around the medical study of to-day was so great, that there was danger that the work in its development done by the earlier fathers of medicine would be overlooked. He would like to call a halt in this, and ask the members present to review with him briefly the origin and history of ancient medicine. He then proceeded from his standpoint to show that with the creation of our first ancestors the necessity for the healing art originated, and he proceeded to unfold, step by step with the progress of ages, its growth into a science. He first took up the medicine of the patriarchs, following it up through centuries to the sacerdotal system or that of the priesthood, and in what manner these had led to the present distinctly professional system. He plainly showed that medicine had an organized existence nine hundred years before Hippocrates—the generally accepted "Father of Medicine"—and perhaps even beyond this. He quoted Herodotus to show the expedients commonly re-

sorted to in the earlier days of science, the recording of cases treated, and remedies used, by writing on the walls of ancient temples, etc. The president then went on to describe the systems of medicine. He began with the Ayar Veda, or sacred revelations of the Hindoo system, and then spoke of the Greek system, fully elaborating the subject. The Roman and Israelitish systems of medicine were fully brought into review, and the entire portion of the paper relating to these systems showed great research and much familiarity with the matters referred to. He also gave an interesting account of the Ebus papyrus, found at ancient Memphis about ten years ago. He referred to this "hermetic book of medicament" now to be seen at Leipsic, and said that it showed diagnoses made, remedies suggested, and systematic treatment of diseases about 1600 B.C. He then traced the origin and progress of medicine in Egypt, and how in after years it was first introduced into Rome, bringing it down to the time of Hippocrates. He spoke of the origin of the medical school at Alexandria and those of Cridnos, which gave rise to the Cridnerian lectures, etc. After this he took up the history of those men who were most prominent under the different systems of the practice of medicine in the olden time.

He referred to the importance of properly organizing and of selecting the proper men who should be placed upon the Board of Medical Examiners for the State, to be appointed during the session, urging the society members to make it a thoroughly independent body. He, although praising the work of the committee, did not by any means look upon the act constituting a Board of Examiners as it now stands, to be exactly what the profession desired, and suggested the appointment of a committee to recommend amendments to the bill as seemed necessary. He took up the subject of the State Board of Health, and showed how ridiculous such a board was made by the fact that no money is given it by the State to do any work with, it consequently being without efficiency, and in fact a nullity. Lastly, he urged that steps should be taken to secure, as soon as possible, a full history of the deceased medical men of the State of Virginia, as it certainly was the duty of the present generation to rescue from oblivion the galaxy of illustrious names which have been emblazoned upon the honorable page of medicine in Virginia.

THURSDAY, SEPTEMBER 11TH—THIRD DAY.

The morning session opened at 9.30 o'clock, Thursday, and the regular business of the Society was proceeded with. After the reading of letters from non-resident honorary fellows, etc., and work of like nature, DR. J. M. TONER, of Washington, was unanimously elected an honorary fellow of the Society.

DR. S. B MORRISON, of Rockbridge County, presented resolutions of

RESPECT TO THE MEMORY OF DR. J. MARION SIMS,

one of the most prominent fellows, which were unanimously adopted by a rising vote.

Dr. S. B. Morrison then read his report on

ADVANCES IN OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

He began by running over the case of pregnant women, and not only referred to the familiar truths of obstetrics, but from his own practice illustrated many of his points. He protested against too much interference with the physiological process of child-bearing, and thought that, as a rule, the less duty the accoucheur felt called upon to perform the better for the patient. He instanced the ease with which the Indians of this country went through this most natural work. He referred to the use and abuse of ergot and chloroform, and fully mentioned the proper method of employing massage and expression. Forceps, he thought, were invaluable, and he pronounced decidedly in favor of the use of the instrument. He believed fully in Denman's rule, that when the ear of the child can be plainly felt in the lower strait the forceps should be employed. Uterine hæmatocele in pregnant women was touched upon, and the reader presented a case from his own practice illustrative of this condition. He referred to the common occurrence of gynecological disorders, and in reporting some of his own cases illustrated the points made in his paper.

He particularly made reference to the fact that an early treatment should be employed in instances of the kind, and laid down the rules he was in the habit of adopting in like cases. Battey's operation he thought would not stand the test of time. He was very desirous that a school for nurses should be established in Virginia. On conclusion of the paper, several members made a few remarks concerning the views presented.

DR. JOHN CLOPTON, of Williamsburg, presented, through another member, his paper upon

ADVANCES IN PSYCHOLOGY AND NEUROLOGY,

which was simply an apology for not preparing a full report.

DR. GEORGE D. HARRISON, of New York, by invitation, read a paper upon

THE MODERN TREATMENT OF WOUNDS.

He considered the subject very fully, detailing the work of micro-organisms on the living tissue. He made a clear statement of the necessary procedure to produce an antiseptic condition of wounds which had taken on suppurative action. His method in operations was, first to keep the wound in an aseptic condition until the dressings were applied, and second, to put on the dressings in such a manner that the wound will remain aseptic. He detailed all the processes of cleanliness which were to be employed in such instances; how the instruments, sponges, operator's hands, drainage-tubes, sutures, etc., should be treated to render them aseptic. Lister's full dressing was described. He was favorably inclined toward the use of iodoform. He said that, according to Von Minewarter, the healing process after the use of the Lister method was decidedly shorter in point of time, and that he fully believed in the same mode. He thought the day of that terrible bugbear of surgery, septicæmia, was about past, and that if operators would fully adopt the *clean method* of treating wounds favorable results would be more frequent. He concluded by paying an eloquent tribute to those men of great scientific renown, Pasteur and Lister.

DR. HUNTER MCGUIRE made some practical remarks upon wounds and their treatment, and gave most excellent advice concerning cleanliness in operations in private practice.

Dr. G. S. Stone, of Loudon County, Dr. S. B. Morrison, of Rockbridge County, Dr. J. H. Neff, of Harrisonburg, Dr. Wm. L. Robinson, of Danville, Dr. J. E. Chancellor, of Charlottesville, Dr. L. Lankford, of Southampton County, Dr. Alban S. Payne, of Atlanta, Ga., Dr. R. Tatum, of Harrisonburg, Dr. Jessie Ewell, Sr., of Prince William County, and Dr. H. M. Patterson, of Highland County, discussed the subject.

The next paper read was presented by DR. ALEXANDER HARRIS, of Jeffersonton, Va., on

THE MEDICINAL PROPERTIES AND THERAPEUTIC APPLICATION OF THE WATERS OF FAUQUIER WHITE SULPHUR SPRINGS, VA.

The reader purposed to give a careful and rational explanation of the medicinal properties and therapeutic application of this water through its chemical constitution. The springs being at such an elevation—about seven hundred feet above sea level—the hygienic surroundings of the hotel and grounds are unsurpassed, this being plainly evidenced by the fact that the writer has not been called upon to treat a case of zymotic disease which had its origin on the premises during his thirty-five

years' connection with the springs. The water is remarkable for its lightness and possesses a very strong sulphurous taste and smell. The quality of lightness enables the patients residing at the springs to ingest nearly twice as much in quantity than if it were an ordinary freestone water. The experience of Dr. Harris and others has shown the water to be primarily diuretic, diaphoretic, or purgative, and secondarily alterative and tonic. It gives, when first tasted, a perceptible stimulant effect, in some cases causing a sense of fulness of the head, in some few cases going so far as to produce headache. The reason for the remarkable therapeutic properties possessed by this water can be readily seen by a careful examination of an analysis of it. There are nearly three grains of iron phosphate, lime, and magnesia in the gallon, and it can be understood how the tired brain is rested and the overworked nervous system is built up by the use of these waters. The reader then compared the analysis of this water with the analyses of 178 of the most important and best known natural mineral waters of this country and Europe, and showed how rarely the ferric phosphates were to be found in those waters—there being only two of this number which have any of this salt in solution, namely, the water under discussion (containing two grains to the gallon), and the Newbury (two-fifths of a grain per gallon). It can be readily understood how broad a range of therapeutic application the Fauquier White Sulphur waters possess in those cases of chronic diseased action dependent upon loss of nerve-power. Not only did Dr. Harris draw upon his own record of practice for illustrative cases, but referred to Burke's work on the Virginia Springs for a number of instances where these waters had done so much good. The use of this water, according to Dr. Harris, is especially valuable in dyspepsias of neurotic origin, in dropsies, in certain instances of neurasthenia, etc.

The third day's afternoon session began at three o'clock Thursday, 11th inst., with the report of Dr. H. W. Clarkson, as chairman of the delegation from the Society to the last session of the American Medical Association.

The committee appointed to report upon the

THERAPEUTIC VALUE OF RAWLEY SPRINGS WATER,

made a return through the chairman, Dr. T. M. Miller, of Frederick County. In his paper he entered into a full analysis of the water, and compared it with that of the most noted and best visited springs of this and other countries. The especial point in Rawley water which renders its therapeutic properties so valuable is the large quantity of protoxide of iron placed in complete solution by the excess of carbonic acid contained therein. The iron being rapidly appropriated by the red corpuscles of the blood, the anæmic patient who uses the water is soon put into a condition where proper assimilation takes place. The water abounds in carbonates, not only of iron, but also of all the common alkalies to the exclusion of the sulphate.

Dr. F. M. Robertson, of Charleston, S. C., by invitation of the Society, also read a paper upon the same subject, the medicinal virtues of Rawley Springs water, in the course of which he very highly extolled its effects.

Drs. George Harrison, of New York City, and F. M. Robertson, of Charleston, S. C., by unanimous vote of the Society, were made non-resident Honorary Fellows.

Dr. Chancellor then yielded the chair to his successor, Dr. S. K. Jackson, of Norfolk, and was unanimously elected an Honorary Fellow of the Society.

The following summer resorts extended invitations to the Society to hold its session of 1885 at their hotels; Rawley Springs, of Rockingham County; Alleghany Springs, of Montgomery County.

It was decided by vote to meet at Alleghany Springs in the fall of 1885.

A unanimous vote of thanks for the extreme kindness and hospitality extended this year to the Society by the Rawley Springs management was passed, the management entertaining the members free of all hotel charge during the session.

Dr. Hunter McGuire then presented his paper upon

INTESTINAL OBSTRUCTION—ITS DIFFERENTIAL DIAGNOSIS.

He began by relating some illustrative cases, which showed the necessity of making, as far as possible, an early and positive diagnosis, for the purpose of operating if necessary. Yet he had seen patients recover entirely with but little or no treatment. He gave the different modes of production of this condition, and showed how operative treatment often offered great prospect of recovery. The paper was mainly confined to the diagnosis of this difficulty. He had seen a patient die in thirty-six hours, and had also seen others which recovered thoroughly after a complete condition of obstruction. He laid down, as a rule, the fact that no purgative should be given at first. This he considered one of the most important points to be remembered. He looked upon opium as the sheet-anchor in these cases. He criticised most unfavorably several of the older methods of treatment. He showed when he thought was the proper time for opening the abdomen, namely in certain cases, in thirty-six hours after the proper medicinal treatment had been faithfully tried.

ETHERIZATION BY THE RECTUM.

Dr. William H. Coggeshall, of Richmond, Va., then read a paper upon this subject, and showed that the method was by no means a new advance in therapeutics, but simply a revival of the process of Pirogoff, who employed it in 1848, a year after the discovery of ether anæsthesia. The writer traced the employment of the rectal process down to about thirty years ago and showed that no clinical record had been made of its use since then, until M. Mollière wrote his first paper for the *Lyons Médicale*, in March last, explaining that Dr. Axel Iversen, of Copenhagen, had called his attention to it, and referred to six successful cases by this method. Dr. Coggeshall presented the details of fifty cases where rectal anæsthesia had been employed, this number being all he could find fully detailed in the American medical journals of this year, one or two occurring in his own practice. He found from examination of the cases reported that by this process the preliminary stage of excitement in anæsthesia is certainly of shorter duration than when the vapor is inhaled. There is also less vomiting, but it may occur at an unexpected time during the operation. The question as to whether the return to sensibility after this method is quicker than when inhalation is used he thought to be doubtful. The great element of danger, however, and the reason why rectal etherization will never come into general use, is because of the liability of the mucous membrane of the lower bowel to take on inflammatory action from the presence of the ether vapor. Two fatal cases were given by the writer out of the fifty reported, making four per cent. of deaths. He gave the fullest instructions for the employment of this method when it was required, as in face and mouth operations, and described his own form of home-made apparatus for rectal anæsthesia, which could easily be improvised by any doctor even away from the city. The several important points insisted upon for the use of ether vapor per rectum were as follows: The lower bowel should be thoroughly cleansed by enemata before the introduction of the rectal tube; the connecting-joints of the tube and tubing must be perfect; the tubing should be about two feet long; the water-bath should be kept as nearly as possible at the same temperature—120° to 140° F.; the rectal tube should be withdrawn when insensibility is complete; the nates should be held tightly together by an assistant; the possibility of sudden peristalsis occurring during the operation should be provided for. The doctor concluded by advising only those to experiment with this method who could afford to take some risk.

The Society by vote thanked Dr. Coggeshall for his painstaking collection of cases of this method.

Dr. William G. Rogers, of Charlottesville, then, as chairman, read the report of the committee appointed last session to secure legislation against the practice of druggists refilling prescriptions containing narcotic poisons without the renewal order by a physician. Although the Committee worked hard for it the bill was not passed by the Legislature last winter.

The evening session opened at 7.30 o'clock, Dr. Samuel K. Jackson, President, in the Chair, with the reading of an excellent paper by Dr. M. A. Rust, of Richmond, on

TYPHOID FEVER.

The reader went rapidly over the pathology of the disease, showing the tissue changes he believed to occur. He spent some time in defining this particular fever, and made a strong protest against calling the fever which is now, and has been, endemic in Richmond, a form of "typho-malarial fever," as he thought that such a combination did not exist. He looked upon it as a special grade of enteric fever, which might be called a by-name for typhoid. He thought the special germs producing malarial fever and typhoid fever never became blended in any one case—in fact that it was impossible for such blending to occur. He endeavored to show that typhoid fever was a distinctly defined disease, whether severe or light in character, having a truly personal character of itself which could never be mingled with that of any other. His treatment for this disorder was mainly cold sponge bathing, sulphate of quinia, bismuth, beef-tea, and wine, and he had great faith in milk as the main article of diet. He recommended that the milk be always boiled for use.

Dr. Alban S. Payne, of Atlanta, Ga., non-resident Honorary Fellow, next read a paper on

CEREBRO-SPINAL MENINGITIS.

He began by saying that as he had so often met with cases of cholera morbus and cholera infantum which could not be differentiated from cerebro-spinal meningitis, he would make a few remarks upon the disease known as cholera infantum. His remarks concerning meningitis were very apt, and were attentively listened to by the members. He had found the monobromide of camphor to be very valuable in treating these diseases. He blisters the nape of the neck with croton-oil, and usually gives a hot mustard bath. Quinine should be given at night or morning, and he was in the habit of giving chlor-anodyne to control pain.

Dr. I. S. Stone, of Loudon County, then read a paper upon the use of

MASSAGE AND ELECTRICITY IN HYSTERIA AND ALLIED DISORDERS,

from the point of view of the general practitioner. He went over some of the forms of hysteria and neurasthenia, and related his success in several such cases. He was a firm believer in the theory and practice of Dr. Weir Mitchell, and thought he had in several instances improved in some degree the methods adopted by that celebrated specialist. He showed how the ordinary country practitioner could successfully handle this class of cases, and illustrated the points mentioned by two or three very severe cases of nervous disease. Seclusion, he thought, was one of the best helps in treatment, especially in female patients, as the constant attendance of visitors to see and talk with the patient that "has such strange symptoms and so bothers the doctors," certainly does an enormous amount of injury. He believed in the value of a skim-milk diet in these cases, and he also used quantities of raw beef made into a broth, after the method of Weir Mitchell.

At 10.30 o'clock the Society was invited by the Rawley Springs management to a very handsome complimentary banquet. The embossed *menus* were engraved and printed for this special occasion, the tables were decorated with flowers, etc., and the wines were excellent. It was a remarkable affair to have been gotten up, off in the country, eleven miles from the railroad.

FRIDAY, SEPTEMBER 12TH—FOURTH DAY.

The fourth day's session convened at 9.30, Friday morning, by Dr. J. N. Upshur opening the discussion on

MALARIAL FEVER,

by reading a paper prepared on the subject by Dr. R. B. Storer, of Richmond. The writer began with a history of miasma, presenting, up to the present year, all that is known on this branch of the subject. He then went into the causation of this condition, and referred especially to the fact that in Richmond, for the past ten years, whenever the streets have been torn up for the purpose of putting in new culverts, etc., fever has invariably followed the excavations. He also mentioned the fact that in that city there are certain portions where fever has followed the introduction of water from a certain part of the water-supply canal, when the other districts of the city have been entirely free from it. He showed that this was the case even where chemical analysis and microscopical examination failed utterly to show anything wrong with the water.

Dr. J. N. Upshur, of Richmond, then presented a paper on

MALARIAL FEVER AS IT OCCURRED IN RICHMOND IN THE SPRING AND SUMMER OF 1884.

He called special attention to the fact that fever of this type occurred generally in other parts of Virginia as well as in Richmond. The type of fever presented some peculiarities different from that ordinarily seen. No doubt the cause of the fever was entirely atmospheric. It will be remembered by the local profession that there was a great deal of rain during the spring and early summer. The reader had noticed on several occasions at night, and it was remarked by others, that there was a most peculiar odor in various parts of the city. It is manifest that the water could have been *no element* in the production of the fever, for the reason that if it had contained the germs of infection, the disease would have attacked all ages and all parts of the city alike, there being little difference in the constitution of the water whether it comes from the canal, or the river, or from the old or new reservoir. The subjects of the fever were mainly young people. Another fact: the fever prevailed in other parts of the State where the inhabitants, it may be inferred, drank well-water, and not James River water. The march of influenza and epizootic disease is an analogous fact. The disorder prevailed from the first of May to the middle of June. The malarial influence during the present summer has been apparent in all the prevalent acute diseases. The doctor draws strong conclusions from the analysis of the drinking-water by Dr. Wm. H. Taylor, State analyst, which has been recently published in the Richmond newspapers. Finally, all of the conditions of the weather were favorable to the production of a malarial disease. An interesting feature of the fever was the coolness of surface when the thermometer indicated a high range of temperature. The doctor reports several cases as illustrative of the features of the fever, one of which is of special interest from the fact that, neither the mouth nor bowel being available at the period of greatest prostration, the patient was kept up by systematic stimulation by means of the subcutaneous injection of brandy. This patient recovered. Dr. Upshur also called especial attention to the presence of epigastric pain as a symptom diagnostic of malaria in children.

Dr. William L. Robinson, of Danville, then read a paper upon

TYPHO-MALARIAL FEVER

as it has occurred in his section of the State during the past ten or twelve years. He presented the symptoms of the fever, and showed that he was correct in describing it as peculiar. It seemed to differ from the same

class of disorder occurring in other sections, and demanded a different form of therapeutic application from that commonly employed. The writer thought that quinine was given too often in large doses in this condition, and remarked that he had never had an abscess from the use of this salt when employed hypodermically, although he frequently gave it in this manner.

Dr. Thomas J. Moore, of Richmond, then delivered a short and practical speech on the general points involved in the causation, diagnosis, and treatment of

MALARIAL FEVER.

He showed that no spot was safe from the attacks of this disease, and that wherever heat, moisture, and decaying vegetation existed it would almost invariably be found. He spoke of the value of drainage, and that malaria could be driven away mile by mile by a proper system of the kind. He gave his personal experience in cases of malarial hæmaturia which he had so frequently met with in North Carolina. He rapidly went over the different conditions under which this disease (malaria) was usually found, showing the varying types. He recommended as treatment for malarial fever what had been empirically found best adapted for this condition in each certain section, except that, early and always, quinine should, of course, be employed. He decidedly preferred to administer the salt hypodermically, and thought that abscesses would be less frequently met with if the needle was boldly pushed into the cellular tissue, and the solution not thrown into the skin. He gave some excellent advice about how to make up the solution, so that the quinia should not only be perfectly dissolved, but that the liquid should not have an acid reaction. He was also impressed very favorably with the action of Warburg's tincture. In connection with the hypodermic injection of quinia, he had found that the addition of a small dose of morphia to each injection was of great value in certain conditions of malaria.

The speaker spoke directly to the point and was listened to with the closest attention.

The President, Dr. S. K. Jackson, made a few remarks upon some of the points raised, and especially recommended the milk diet in typhoid fever. He was absolutely opposed to all starchy foods. He had at times, when using maltine, been able to allow the patient to take a little of that class of food. He made great use of strong beef-tea, and usually kept the patient on nothing but the latter liquid and milk through the course of the illness.

Drs. Stone, Moore, Upshur, and Rust discussed the subject of malaria, but no novel views were presented. A great difference of opinion was manifest regarding the question as to whether typho-malarial fever was a distinct disease.

A paper by Dr. E. E. Field, of Norfolk, entitled

YELLOW CHILLS,

was read by title.

Dr. William Selden, of Norfolk, was elected an Honorary Fellow of the Society, and a considerable amount of routine business was transacted.

Dr. Joseph A. White, of Richmond, then presented a paper entitled

SOME REMARKS ABOUT CATARACT, WITH A REPORT OF FIFTY-TWO CASES.

After speaking of the mistakes often made in confounding other eye troubles with cataract, by careless practitioners, some of which are ludicrous and some serious in their tragical results, he gave a short history of the operation of "extraction" with the various modifications it has undergone. He advocated strongly the performance of iridectomy as increasing the chances of a successful result, in opposition to the recent tendency of the French school to return to Daniel's method, also showing its advantages as a preliminary operation in certain cases, as it divides and diminishes the traumatism. He gave an account of Foster's operation of "trituration of the lens" for ripening cataract, with a reference to some cases of his own, but considered that it has, like all other surgical operations, its attendant risks, and is as yet only on probation. After some remarks on the opening of the capsule, he passed to a consideration of the cases operated on in Richmond during the past four and a half years—fifty-two in number. There were no failures in cases under seventy years of age, and only two over seventy years, as a result of the traumatism. Another patient lost his eye after recovery, from septic infection of both eyes, by a sponge used by a hospital attendant, setting up purulent ophthalmia. Anæsthesia was used in eleven cases only, and the most serious accidents during the operation, which occurred in nine cases, he attributed to the vomiting induced by the anæsthetic. He uses anæsthesia only in very timid or cowardly patients, because there is very little pain from the operation if he can trust to the statements of those operated upon. In regard to antisepsis in cataract operations, he thinks that it is quite sufficient to see that the most scrupulous cleanliness before and during the operation is observed, especially of all the instruments employed. He uses instruments as little as possible, and after the iridectomy does away with the blepharostat and uses the lids and his fingers to remove the lens. In regard to the secondary operation of cutting the capsule he considered it of great importance as increasing the visual acuteness and lessening the chances of subsequent reaction about the capsule and iris, and instanced a case in point where, from neglect of this precaution, a patient with good vision lost the eye eighteen months after, the trouble starting in the capsule, which had gradually thickened and wrinkled, ending in iridocapsulitis and cyclitis. Dr. White concluded his paper with a full report of a case of some physiological interest as exemplifying the accepted theory of vision. A man named Daniel F——, of Weldon, N. C., had become blind with double cataract when seven years of age, was educated in an asylum for the blind, and was operated on in Richmond, Va., when thirty-two years old. The result was perfect vision in both eyes. He could judge nothing of the shape of an article until he touched it. He could not locate objects in space, and invariably miscalculated the distance when reaching for anything. He was afraid to walk about because he could not judge of the height or depth of anything in his way—such as gutters or curbstones. In fact he was less independent when he first recovered vision than before he was operated upon.

It was decided that the subject of "Scarlet Fever" should be the one for general discussion at next year's meeting, and Dr. Thomas J. Moore, of Richmond, was appointed to read the first paper on the subject.

The Society then adjourned *sine die*.

Altogether the session of 1884 was the best one ever held by the Society, the papers read were in the main valuable and practical, the attendance the largest in the history of the Association, there being between 125 and 250 members registered as present, and over sixty new members were elected.

The following are

THE OFFICERS ELECTED FOR 1884–85:

President—Dr. Samuel K. Jackson, of Norfolk; *First Vice-President*—Dr. Jesse Ewell, Sr., of Hickory Grove, Prince William County; *Second Vice-President*—Dr. Benjamin Blackford, of Lynchburg; *Third Vice-President*—Dr. Robert I. Hicks, of Casanova, Fauquier County; *Recording Secretary*—Dr. Landon B. Edwards, of Richmond, Va.; *Corresponding Secretary*—Dr. Hugh Taylor, of Richmond, Va.; *Treasurer*—Dr. Richard T. Styll, of Richmond, Va.; *Executive Committee*—Dr. W. W. Parker, of Richmond (Chairman), Drs. Harvey Black, Francis D. Cunningham, John Herbert Claiborne, and L. Ashton; *Committee on Publication*—Drs. E. T. Robinson, C. W. P. Brock, and George Ross.

International Medical Congress.

EIGHTH SESSION.

Held at Copenhagen, Denmark, August 10–16, 1884.

REPORTS OF SECTIONS.

SECTION OF OBSTETRICS AND GYNECOLOGY.

Prof. Koeberlé, of Strasburg, read a paper on the

TREATMENT OF UTERINE MYOMATA BY LAPAROTOMY.

The indications for the operation were: the gravity of the state of the patient in consequence of excessive or prolonged catamenial hemorrhage, or from the rapid or continued increase of the tumor, and from the age of the patient, from the seat of the tumor, by the particular circumstances, as when life became unsupportable from the troubles caused by the tumor. Operation was contra-indicated when there were extensive vascular adhesions to the abdominal walls, or when the too extended tumor had too extensive connections; when it was enclosed in the pelvis; when there was ascitic effusions liable to increase, and to reproduce them quickly; or when there was some concomitant incurable affection, or some circumstances which might exercise an unfavorable influence in recovery. The operative method varied according to the seat and size of the tumor. Uterine fibro-myomata should be operated on by the vaginal method in cases where they formed a more or less pronounced swelling in the uterine cavity and toward the vagina, when the size of the canal thus allowed extraction in this way. Fibro-myoma, projecting into the extreme cavity, and immovable by the genital canal, as well as interstitial and sub-peritoneal tumors were capable of removal by laparotomy. Professor Koeberlé spoke on hysterotomy and hysterectomy, and gave the general rules for their operation. He stated the result was very favorable when the tumors were developed in the body of the uterus. The operation was difficult and grave when the tumors were developed in the broad ligaments, and deeply imbedded in the pelvic cavity. The reunion of the abdominal wound, dressing, and antiseptic treatment were next passed in review. Dr. Koeberlé concluded his paper by affirming that the treatment of uterine fibro-myomata by laparotomy constituted a real progress in contemporary surgery, and merited in every way serious considerations.

This communication was well received and discussed by Sir Spencer Wells, of London, Dr. Margary, of Turin, and Dr. Apostoli, of Paris.

ELECTRIC TREATMENT OF UTERINE MYOMATA.

Dr. Apostoli, of Paris, proposed a new electrical therapeusis for uterine fibromata, distinguished by its point of application, nature, intensity, and its manual mode of application. To the old procedure of the application of continuous currents to the cure of fibrous tumors—characterized: (1) by very feeble electrical intensity; (2) by the vagina being oftenest the point of application of the positive pole—he opposed a treatment always more active, since it reached 100 millimetres of intensity, and was always intra-uterine, acting along the whole depth and extent of the uterine mucous membrane. A clinical experience, extending over two years, upon over one hundred cases, had shown that the treatment constantly reduced the size of the uterus, and completely restored the patient.

DESTRUCTION OF UTERINE TUMORS BY ELECTROLYTIC PUNCTURE.

Dr. P. Menière, of Paris, advocated the destruction of uterine tumors by electrolytic puncture. This, he said, constituted an operation which was effectual and of little danger, provided that it were practised, not by the vagina, but across the abdominal wall. It was indicated —(1) when medical treatment had failed; (2) where the fibromas were very large, and also only slightly movable; (3) when they endangered the life of the patient by continuous metrorrhagias or grave general trouble; (4) it was a final resource in cases where total removal was impossible. This operation had already been practised by Cutler in 1871, Broure in 1873, Kimbal in 1874, Cinisalli in 1875, and Semeleder in 1876. But their operative procedures differed, were very vaguely described, and little known in Europe. In face of the marvellous results which he had got in six cases, the results of which were indelibly fixed in his memory, it seemed to him to be of interest and useful to call the attention of the Congress to this point of gynecological therapeutics, and particularly to the manual method of procedure, on which he had, after numerous trials, finally settled. The instruments employed were: (1) a battery of the continuous current of Gaiffe, with twenty-four pairs of zinc plates, and galvanometer divided in milliampéres; (2 gold needles, ten centimetres long by a millimetre and a half thick, flattened and pointed at their extremities (o lance-shape, with cutting edges); they were isolated for a length of seven centimetres by means of resinous varnish, dried and calcined in the flame of a spirit-lamp (3) a needle propeller, with a graduated stop-notch, so as to insert the needles to a depth previously fixed upon; (4) light and flexible conducting wires, joined to the needles by means of a *serres fines*. The operation was, he said, repeated twice a week, or every ten days, in case of inflammatory accidents; the sittings lasting twenty minutes from the insertion of the positive and negative electrodes the depth of eight centimetres; a current of from forty to fifty milliampéres; and, after the extraction of the needles, the closing of the cutaneous orifice with collodion.

Dr. Margary, of Turin, advocated supravaginal amputation of the uterus from the vagina as a treatment for fibromata in the posterior uterine wall.

OÖPHORECTOMY AS A REMEDY AGAINST UTERINE TUMORS.

Dr. Wiedow, of Freiburg, said that he had collected the cases in which removal of the ovaries had been performed for uterine tumors, partly from published records, partly from private information. Through the friendly co-operation of a large number of German, Austrian, and Swiss practitioners, he was able to arrive at conclusions as to the lasting influence of the operations, and the subsequent condition of the patients on whom it was performed. The principal point was to show the influence of the operation on the cessation of hemorrhage, and on the diminution of the size of the tumors. He also endeavored to point out whether, and in what way, the result of the operation was modified by the situation and size of the tumor.

Prof. Hegar, of Freiburg, and Sir Spencer Wells took part in the discussion which followed.

THE CÆSAREAN SECTION AND ITS MODIFICATIONS.

Prof. P. Muller, of Berne, read a paper on this subject. He said that the prognosis in Cæsarean sections had been hitherto very unfavorable, the death-rate exceeding eighty per cent. The recent advances in surgery, especially the improvements in laparotomy, had had an influence on the operation, which was shown by the endeavors to successfully combat the loss of blood and sepsis. This object was sought to be attained by two essentially different ways; the modifications were either radical or conservative. In the radical modifications the source of hemorrhage and of septic infection was cut off by the uterus, in the conservative the uterus was retained and an endeavor was made to ward off these dangers by careful treatment of the uterine wound. Both methods had doubtless certain advantages, but theoretical considerations could not support the radical modification. Yet, in regard to this matter, the result must turn the scale; the operation which was attended

with the lowest mortality must be accepted as the best. The death-rate of the radical operation was about fifty per cent.; but trustworthy statistics were wanting with regard to the conservative method, of which there had been as yet less experience than of the former. It therefore remained yet to be decided which operation should be preferred. If the conservative method should gain recognition, another condition would have to be fulfilled, namely, to protect the woman against rupture of the uterus in a subsequent pregnancy, and against the danger of another Cæsarean section; and this would have to be done in a much more satisfactory and safe way than had hitherto been the case in the Cæsarean operation.

INTERMITTENT CONTRACTIONS OF THE UTERUS IN THE DIAGNOSIS OF PREGNANCY AND ITS COMPLICATIONS.

Dr. Braxton Hicks, of London, presented a paper on this subject, illustrated by three cases. He again called attention to the value of this means of diagnosis, and briefly referred to the discussion on his paper in the last Congress, where it was stated that soft tumors of the uterus also contracted at intervals. Presuming this was ultimately found to be correct in general, the cases in which this would interfere with the diagnosis were pointed out, namely, those in which the fœtus could not be felt, and where hemorrhage was urgent, for instance, where the uterus remained constantly firm, as in some cases of blighted ovum, apoplectic ovum. In these there was almost always a history of pregnancy, and of recent hemorrhage; while if there was amenorrhœa or only normal menses, it would be exceedingly rare if it were a soft tumor. He gave three cases, two of pregnancy complicated with uterine fibromata. In the third one, of extreme obliquity of the uterus, it was difficult to say how much was uterus. In all the cases, the exact relation of the uterus was clearly and readily made out by means of the alteration which occurred at short intervals in the density of the uterus.

ANTISEPTICS IN LAPAROTOMY.

Prof. Mikulicz, of Cracow, began by referring to the necessity of antiseptics in laparotomy as well as in all other operations attended with loss of blood. The principles of the use of antiseptics in laparotomy were the same as in other great operations; but the details differed essentially in some points. This depended on the peculiarities of the peritoneum, which in some respects favored, while in others they impeded the application of antisepsis. The most important properties of the peritoneum having an influence in antisepsis were, first, the great extent of surface, which was a source of danger of cooling on exposure, of rapidly spreading inflammatory and septic processes, etc.; seeing its great power of absorption and excitation, the first leading, in septic peritonitis, to general septic infection, while, in the healthy peritoneum, it prevented the accumulation of large masses of secretion; thirdly, the liability to pour out plastic exudations, and to rapidly form firm adhesions; in this way, foci of inflammation might be localized, and ligatures and separated masses of tissue encapsuled. With regard to antisepsis in laparotomy, attention was directed to the following points: 1. The peritoneum is more easily affected by septic infective matters than any other tissue. Besides this, it was not possible to use, as with wounds of other parts, very active antiseptic measures, such as irrigation with carbolic acid and other powerful means, as, on account of the rapid absorption, the danger of poisoning by the antiseptic was very great. Again, while drainage was of great use in wounds of other parts, it was useless in the peritoneal cavity, and could not obviate the results of infection of any kind. For these reasons, the chief point to be attended to in antisepsis during laparotomy was the absolute withholding of septic materials from the peritoneum; and herein lay the great difference between antisepsis in laparotomy and other operations. In laparotomy, antisepsis was pre-eminently prophylactic. The cleansing and disinfecting of everything which was to be used in or had any relation to the operation must be carried out much more thoroughly than in other operations. The spray was superfluous in faultlessly clean rooms; but in hospitals it should be used for half an hour to an hour before the operation, for the mechanical purification of the air. During the operation it was useless. In operations on the stomach and intestines, the absolute prevention of the escape of the gastric or intestinal contents was one of the most important points in antisepsis. Drainage of the peritoneum was nearly always quite superfluous in operations performed aseptically; it might even be dangerous to allow infection of the periosteum to take place through the drainage openings. Complete drainage of the peritoneum by the methods now in use was, on mechanical grounds, altogether impossible. Hence drainage was permissible in laparatomy only in rare and exceptional cases. 2. Besides direct infection during the operation, spontaneous infection might occur in the peritoneum in certain conditions. It occurred when a large quantity of fresh, especially serosanguineous fluid collected in the peritoneum and was not rapidly absorbed. In this was developed bacteria, which led to decomposition of the secretion, and infection of the peritoneum. Hence the second great principle of antisepsis in laparotomy was to prevent the collection of secretion in the peritoneal cavity. Any means which limited the amount of secretion in the peritoneum or favored its absorption was a part of antisepsis in laparotomy. An accurate "toilet of peritoneum" was of the first importance; next came the prevention of secreting wound-surfaces in the peritoneum by various means, such as ligature *en masse*, cauterization of the pedicle and of adhesions, suture of the wounded surfaces, *e.g.*, of the ligamenta lata or of the stump of the uterus (as in Schröder's myomotomy), the shelling out of tumors having a wide base or lying behind the periosteum, followed by suture of the peritoneal covering to the abdominal wound, so as to shut off the entire surface of the wound from the peritoneum. Everything also must be avoided which might too powerfully excite the peritoneum to secretion; *e.g.*, irritation by strong antiseptics. To favor absorption, a compressive bandage should be applied over the whole abdomen; it also fulfils the necessary object of keeping the abdomen at rest. With regard to the material used for ligature, catgut and carefully disinfected silk were equally good from an antiseptic point of view. The pedicle might be treated either extraperitoneally or intraperitoneally, so long as the abdominal cavity was perfectly closed. The manner in which the sutures were applied to the abdomen has no influence, provided that the surfaces of peritoneum were properly united. Any special method of dressing the wound was of very little importance, provided that no drainage-tubes were introduced into the abdominal cavity. A narrow strip of material, rendered antiseptic, was quite sufficient for the dressing of the wound; and for this purpose, solution of carbolic acid was the best and safest means. Large quantities of iodoform were dangerous, on account of the liability to poisoning; but Dr. Mikulicz had with advantage applied it in very small quantities to the pedicle and to the sutured stump of the uterus.

INTERNATIONAL NOMENCLATURE IN OBSTETRICS.

Prof. Simpson, of Edinburgh, submitted a report on this subject, which he had brought before the Congress in London in 1881. At that Congress, a committee had been appointed to consider the matter and report to this Congress; but, practically, nothing had been done by the committee. The section now reconsidered the matter, reaffirmed its importance, and requested the committee to go into it afresh and report to the next Congress.

THE SIGNIFICANCE OF ALBUMINURIA IN PREGNANT WOMEN.

Prof. Halberstma, of Utrecht, in a paper on this subject, said, in the first place, that the facts observed did not permit his recognizing, as the cause of albuminuria in pregnant women, a reflex contraction of the renal arteries; second, albuminuria in pregnant women was specially observed when there was a want of proportion between the size of the gravid uterus and the abdominal cavity; and, third, the cause of albuminuria in pregnant women was, in the greater number of the cases, the tension and compression of the uterus.

SOME DIAGNOSTIC DIFFICULTIES CAUSED BY HYPERTROPHY OF THE CERVIX UTERI.

Prof. Howitz, of Copenhagen, pointed out that, in cases of hypertrophy of the neck complicated by dilatation of the body and fundus of the uterus, special symptoms arose in consequence of change of the anatomical relations. In cases of pregnancy, especially in the first months, this condition gave rise to diagnostic difficulties. The elevated situation of the uterine enlargement, its strange mobility, its elasticity and situation, were characteristic guides in such cases. The fœtal *bruit* could also be heard sooner than ordinary. A careful examination by the vagina and rectum would give precise information as to the exact condition of the uterus.

Dr. Priestley, of London, said he had seen cases very analogous to those described by Professor Howitz, which produced, not difficulty in diagnosis, but difficulty in accouchement. It was a question well deserving of consideration, whether, in certain cases, some operative measure might not be adopted.

THE OPERATIVE TREATMENT OF EXTRA-UTERINE PREGNANCY.

Prof. Werth, of Kiel, said that operation was indicated in the early months of pregnancy when the fœtus, being dead and lying in Douglas' pouch, produced severe symptoms of incarceration. On the other hand, laparotomy was without object when it was concluded that rupture of the sac had taken place, and experience up to the present time was in favor of expectant treatment. When pregnancy was more advanced, and the embryo was alive, operation gave little prospect of saving the child, and was of unfavorable prognosis for the mother, except in cases where the anatomical conditions favored the removal of the entire ovum with its membranes. Hence it was a principle to avoid operation while the child was alive, and to wait for its death. The expulsive movements following the death of the embryo could, as a rule, be held in check by appropriate means. As the extra-uterine position of a fœtus which had died after having passed beyond the first stages of development was a source of danger to the mother's life, removal by operation of the dead fœtus was necessary. The prognosis was incomparably better than that of operation during the life of the fœtus, provided that a suitable time was chosen for the operation. This, whenever possible, should not be performed before arrest of the circulation in the maternal placenta might be supposed to have taken place; namely, from the tenth to the twelfth week after the death of the fœtus. Speaking of the methods of operation, Dr. Werth said that, in the rare cases of prolonged pregnancy in the outer part of the Fallopian tube or in the ovary, with simultaneous unfolding of the broad ligament, extirpation of the entire sac was indicated; the operation was like ovariotomy, and the prognosis was similar. As a general rule, the sac should be sutured to the abdominal wound. The placenta and membranes of the ovum should be removed, if there was no doubt as to the previous occlusion of the placental sinuses by thrombosis. If strict antiseptic precautions were followed during the operation, and an occlusive dressing applied, then neither preventive drainage through the vagina nor permanent irrigation of the sac was necessary, provided that decomposition of the contents of the sac had not already set in. Both these were to be avoided, as well as washing out and plugging the sac when the operation was performed during the life of the embryo or shortly after its death, and when artificial or spontaneous detachment of the placenta threatened fatal hemorrhage. On the other hand, the author recommended in these circumstances the partial filling of the fœtal sac with some substance (tannin and salicylic acid in equal proportions, according to Freund), which might enable the placenta to remain aseptic until it was thrown off at a later date. Elytrotomy was preferable to gastrostomy only in some rare and peculiar cases. With regard to the proceeding recommended by Martin, of partial removal of the fœtal sac, suture of the remaining part, and drainage through the vagina, further experience was required before a decision could be arrived at as to its general applicability.

THE EARLY PERFORMANCE OF OVARIOTOMY.

Mr. Knowsley Thornton, of London, read a paper on this subject. He first considered whether it was ever right to interfere with an ovarian tumor by tapping or by aspiration. Spencer Wells, Keith, and Thomas were in favor of tapping; and many other leading ovariotomists encouraged it. He gave quotations from Gross, Emmet, and Lawson Tait against the practice; and referred to the doubtful advantages claimed for this proceeding compared with its dangers and its immediate and remote mortality. He said that exploratory incision was far safer and better in doubtful cases. Tapping should be condemned, except in some very rare occasions. He would always remove an ovarian tumor as soon as it was large enough to be abdominal and slightly stretch the parietes. There were objections to operating earlier, except in special cases. The danger was in delay. Pathological changes in the cysts might lead to the escape of their contents, and to the formation of adhesions; or the pedicle might become twisted. He adduced illustrations of the dangers of delay, drawn from over four hundred ovariotomies he had performed, including forty cases in which ovarian fluid was free in the peritoneum, and thirty-four cases of twisted pedicle. He then summed up by considering the following questions: 1. Is tapping ovarian or parovarian cysts, or cysts of the broad ligament, ever justifiable; and if so, what conditions justify it? 2. Can any fairly general and defined rule be laid down as to the proper time at which to perform ovariotomy; and if so, what conditions justify an earlier or later operation? He concluded by appealing to the profession to still further improve the brilliant results of ovariotomy by condemning tapping and supporting early operation.

MANAGEMENT OF THE THIRD STAGE OF LABOR.

Prof. Stadfeldt, of Copenhagen, read a paper in which he gave the result of the expectant method of treatment, Credé's method, and the Dublin method. In the expectant method, as practised in Copenhagen, the placenta was allowed to become detached spontaneously, and to escape into the vagina, unless severe hemorrhage indicated earlier removal of the contents of the uterus. As a rule, the detachment of the placenta took place within about two hours. In Credé's method, circular frictions of the fundus uteri were made immediately after the birth of the child, and during a strong after-pain, generally the third, the placenta was pressed out by a combined concentric and pushing down pressure on the fundus and body of the uterus. The Dublin method was described in somewhat different terms by different authors. As a rule, the chief importance was attached to pressure on the fundus uteri immediately after the birth of the child. This, he thought, tended to increase anteflexion, and thereby to impede the escape of the placenta. He had, therefore, applied friction to the fundus uteri, as in the first stage of Credé's method, and when the placenta

had escaped into the vagina, it was easily removed by the help of two fingers, with simultaneous gentle traction on the umbilical cord. In a few cases, where the placenta was not expelled at the end of half an hour, he made a depressing movement through the fundus. When these methods failed, the placenta was removed by the introduction of the hand into the uterus. Dr. Stadfeldt had treated a large number of cases by each of the three methods above named, and gave results. From his statistics he excluded all cases of abortion and of placenta prævia, cases in which the contents of the uterus were putrid, and some cases of very difficult labor. From April 1, 1873, to March 31, 1877, he followed the expectant method in 1,780 cases; from September 1, 1877, to February 1, 1881, Credé's method in 1,611 cases; from May 12, 1882, to February 15, 1884, the Dublin method in 971 cases; and from February 16 to May 30, 1881, the expectant method in 198 cases. The results indicated that, when compared with the expectant method, that of Credé was preferable. Detachment and reunion of the membranes, or of small portions of placenta, indeed, occurred more frequently, but the preponderance was not great (2.3 against 1.8 per cent.), and any danger might be obviated by the use of antiseptics. On the whole, it seemed to him that the objectors to Credé's method were wrong in attaching too much importance to its disadvantages, and overlooking the fact that it removed the dangers attendant on the expectant method during the time of waiting, especially outside lying-in hospitals. It could not, however, be denied that the proper and safe application of Credé's method required so much intelligence and accuracy that it might be attended with danger in the hands of unskilful persons, and, therefore, it was not thought right in Copenhagen to teach it to midwives. On the other hand, the Dublin method was easily learnt, and was free from the dangers of the expectant and Credé's methods; on the one hand, it diminished the danger of flooding and of retention of the placenta; and, on the other, removed the danger of separation and retention of the membranes. It had been said that Credé's method, by favoring retention of the membranes of the decidua, was more liable than the expectant method to give rise to puerperal disease and mortality. The contrary was the result in Dr. Stadfeldt's experience; the figures given being, with the expectant method, for disease, 24 per cent., and for mortality, 1.9 per cent.; with Credé's method, disease, 18.3 per cent., mortality, 0.6 per cent. In both series antiseptics had been used with equal energy. He believed that, in the present day, retention of the membranes had little influence on puerperal disease and mortality, provided that strict antiseptic precautions were carried out during labor, and that the accoucheur abstained from unnecessary meddling during the lying-in period. Large portions of decidua might even be left in the uterus without becoming septic, and without giving rise to self-infection of the patient.

CONGENITAL LATEROPOSITIONS OF THE UTERUS, ETC.

Prof. Lazarewitsch, of Kharkoff, addressed the Section on the congenital lateropositions of the uterus in their relations to the mechanism of labor and to the peri-uterine tumors. These congenital lateropositions were, he said, frequent, especially those in which the uterus was completely displaced to the left. Those which depended on the development of pathological growths must be chanced to other positions, and on that account must be called accidental. But if they depended on a defect in the development of the broad ligament, or of the lateral wall of the vagina, these positions were invariable, and did not alter during the growth of the tumors, whatever these might be, which were formed round the uterus, any more than during the period of pregnancy. If the lateral position of the uterus was sufficiently marked, the anterior position of the recto-uterine pouch, being displaced by the uterus, took an oblique shape; and the ovary, which corresponded to the large side of the peri-uterine space, being pressed upon, often lay above the peri-uterine pouch, and fell down more or less. The ovary of the opposite side, not finding place near the uterus, was ordinarily raised up and passed above the upper entrance to the cavity. According as the one or the other ovary became cystic, the cyst either remained for a longer or shorter time in the deep cavity, and in its growth displaced the uterus forward and upward, or, from the beginning of the growth, was found above the deep pelvis and the uterus, leaving it free. If the ovary corresponding to the large side of the peri-uterine space became cystic, the pedicle of the cyst was ordinarily long; and on the contrary, it was short if the cyst belonged to the ovary on the smaller side of the peri-uterine space. Thus, so far as the lateral position of the uterus was concerned, one was not able to say to which of the ovaries the cyst belonged; but, if one knew to which ovary the cyst belonged, one could estimate the length of the pedicle. Being turned to one side, the uterus left free entrance to the recto-uterine pouch; and, for this reason, the blood of the pouch could spread in all directions. If the uterus was turned to one side, it was difficult to say that it was completely inclined, or bent forward or backward; it was in this event that the cases of lateroversion and lateroflexion were met with. In the case where the uterus was turned to one side, pessaries could not maintain it, owing to the difference in the length of the lateral walls, and the different heights or lateral arches of the vagina. One was often deceived as to the origin of the pain felt sometimes on one side in the lower part of the abdomen, particularly during menstruation, in attributing this to the ovary. This pain most often proceeds from the laterally displaced womb. The congenital lateropositions, as well as the lateroversions of the womb, had an evident influence on the mechanism of labor, but this influence was not proportional. In the lateroversion the womb, increasing during pregnancy, preserved its regular form, changing only the direction of its axis; whereas, when displaced in the lateroposition, it preserved the direction of its axis but changed its shape, because, on the side on which it approaches one of the lateral walls of the pelvis, its lower segment did not expand, or expanded very little, while the segment on the opposite side underwent the sacciform expansion. During labor one could easily do away with the lateroversion of the womb by making the woman assume a suitable position, or by keeping up, by means of the hands, the corresponding side of the womb. But these measures became useless if the womb was in the state of lateroposition. In this case, it was enough to introduce the finger into the neck of the uterus, and to draw it toward the middle of the pelvis.

STATISTICS OF PUERPERAL FEVER IN DENMARK.

Dr. E. Ingerslev, of Copenhagen, read a paper in which he gave a brief summary of a research into puerperal mortality in the towns of the Danish provinces and in Copenhagen for the last seventeen years. The principal aim of the paper was to explain how the difference between the mortality in the maternities and outside of them, elsewhere brought into such strong relief, had lost its *raison d'être*, since it was proved that the antiseptic measures to be taken in labor were still less performed outside of maternities. He also stated his opinion that matters were, up to this time, nearly as successfully managed in the towns as in the country districts of Denmark. Dr. Ingerslev went on to show the ravages of puerperal fever were most manifest when one looked at the proportion between the puerperal mortality and the total mortality in women from fifteen to forty-five years of age, that was to say, of the age at which labor generally took place. In this regard, a great resemblance was found between this and like researches made a short time back in Prussia. The great difficulties in the way of finding a fairly exact expression for the puerperal mortality would be, perhaps, best overcome in a small country, where one could most easily obtain a general

view of things, and make requisite corrections by addressing oneself to medical men for the necessary explanations. He had made the attempt for a period of some years, and in this way had made a calculation of the mortality as near as possible, and showing, at the same time, a minimum of errors. The calculation, so checked, showed an evident decrease in the puerperal mortality, which undoubtedly was due to a more strictly antiseptic conduct of labors even outside the maternities.

THE UTERINE ADENOLYMPHANGITIS.

Dr. Martineau, of Paris, read a paper on the above condition "as a cause of the so-called peri-uterine troubles and its importance for the treatment of the inflammation of the uterus." He took the view that the uterine and peri-uterine adenolymphangitis was closely connected with uterine inflammation. Acute or chronic metritis could not exist without the uterine and peri-uterine lymphatic system sharing in the inflammation of the uterine tissue. Peri-uterine adenolymphangitis was the origin of the inflammatory accidents called peri-uterine, such as phlegmon of the broad ligament, peri-uterine phlegmon, perimetritis, and pelvic peritonitis. The designation of these conditions by the names adenophlegmon of the broad ligament, peri-uterine adenophlegmon, adenopelvic peritonitis, was that which suited them, because it recalled their origin and pathology. The peri-uterine adenolymphangitis being equivalent to uterine inflammation, every cause which would have as a result the increasing of this inflammation would at the same time increase the peri-uterine adenolymphangitis, and bring about the accidents of which it was the origin. Adenolymphangitis, when there was a question of instituting local treatment, the treatment of the lesions of the metritis, gave the indication and contra-indication for the treatment, as pathogenic and nosological treatment could produce an excitation of the uterine inflammation.

A NEW ELECTRIC TREATMENT OF PERIMETRITIS.

Dr. Apostoli proposed "a new electric treatment of perimetritis by double faradization of the uterus." He described, in the first place, the modification which he had introduced in the manual application of uterine faradization (A. Trifner's method); and he enumerated its general advantages in the treatment of simple metritis. He applied his method also advantageously in perimetritis, and described the manual method, the dose, duration, and intensity of the application. Summing up, he had always found the faradic currents, of high tension, feeble dose, and long duration, relieve every perimetritis, even acute, and bring about its rapid resolution.

TREATMENT OF PUERPERAL FEVER BY COLD BATHS.

Prof. Vincent, of Lyons, said: 1. That the administration of cold baths was practicable with the recently delivered attacked with puerperal fever. 2. That cold baths were free from danger in the puerperal state. 3. They had a certain and quick antifebrile effect in the sequelæ of delivery. 4. Recovery from puerperal fever was the rule with treatment by baths of proper temperature and methodically administered. 5. Cold baths were indicated in all high temperature forms of after-complications of childbirth, the very acute peritonitis excepted. The indication for cold baths did not arise except where the fever was kept up, without notable morning remission, to about 40° Cent., when the powerlessness of quinine and diffusible stimulants in full doses had been shown, and when, in fine, the lochias were fetid, and intra-uterine injections had been carefully tried without bringing a fall in the febrile condition. 6. Cold baths should be administered at a temperature varying from 28° to 18° Cent.; according to the fall secured by the first bath, given at 28° or 30°, the temperature of the subsequent baths should be reduced. (The rule was, to get with a cold or tepid bath a fall of from one to two degrees of the patient's temperature.) The method used in typhoid fever, treated by cold baths after the system of Dr. Brand, should be followed, with modifications. 7. The cold baths were repeated every three hours until the temperature had fallen to 38°, and stayed there, with only ascending oscillations of some tenths in the evening. 8. When baths of 18° or 20° repeated every three hours, night and day, did not bring about a notable reduction of temperature, a large ice-bag should be placed in the intervals of the baths, on the abdomen of the patient. 9. Along with the cold baths and the ice-bags, spirits and tonics should be freely administered; the patients should be fed with liquid or semi-liquid foods, having much nutriment in a small bulk—soups, beef-tea, American broth, milk, etc.

Dr. Marcy, of Boston, advocated the restoration of the perineum by a new method; and Dr. Zambaco, of Constantinople, submitted to the Section some "Physiological and Pathological Remarks upon the Women of the East."

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

ALCOHOL AND THE HEALTH EXHIBITION—DR. MOXON ON LORD TENNYSON—ONSLAUGHTS ON DOCTORS—SMALL-POX AND VACCINATION—DECREASE OF THE EPIDEMIC.

London, August 30, 1884.

The Health Exhibition continues to attract shoals of visitors. I must confess that my own experience of it has been very disappointing. A good many of the exhibits are very interesting and some of them instructive, but what possible relation many of them can be said to bear to the subject of health I cannot say. Lace-making, glove-making, candle-making, and so on, are all interesting in a way, but what place have they in a health exhibition? The same remark applies to the Chinese and Japanese Courts—entertaining as the latter are. The number of alcoholic exhibits and the space occupied by some of them would certainly lead a superficial observer to imagine that, in England, alcohol is a *sine qua non* of health. The "intelligent foreigner" who visits the Exhibition, would perhaps be surprised to learn that there are now nearly a million of total abstainers in Great Britain, including some hundreds of medical men. Although not an abstainer myself, I cannot but think that the wholesale admission of alcoholic exhibits is calculated to do harm. Their presence in such an exhibition gives them a position, so to say, and people will be tempted to imbibe alcoholic drinks more freely than heretofore, because "they have been shown at the 'Health.'" The gratuitous distribution of glasses of wine and beer (*as samples*) by the exhibitors, does not look at all well. The Council have at last forbidden it as regards the beer, but it still goes on as regards the wine.

The poet-laureate has received the hardest blow I should think he ever had administered to him. In the current number of *The Lancet*, in a most striking and suggestive paper on the late Dr. Hilton Fagge, Dr. Moxon takes Tennyson to task for his foul libel on the medical profession in his volume of ballads published at Christmas, 1880. I cannot resist quoting a piece:

"Fagge's greatness as a physician appeared in his always kind and sympathetic and Christian treatment of the sick poor. It is easy for poets to put their own denials of Christ into other people's mouths, and then as fashionable authors to spread them about on drawing-room tables. It is convenient to be able to work off your baser sentiments in a false character; you yourself then appear pure by contrast with your own creations. But if one's solemn everyday duty is spent face to face and eye to eye with the sorrowing and suffering poor, one wonders how even a poet-laureate could be capable of think-

ing the matter of those loathsome lines of this new peer. I wonder is he yet ashamed of them? What footing has this poet aristocrat on any grounds of charity that justifies him in putting his blasphemous sentences into the mouth of the child he supposes? Let him go into a children's hospital, and see how far the poor sick little ones think as vilely as he of the kind-hearted doctor, whose only sorrow is that his best help to his little patients too often proves ineffectual. Fagge was physician to the Evelina Hospital for Sick Children. His sympathies were not with grandeur and the House of Lords."

This is harsh but not undeserved, as those who have read through the poem referred to will admit. Many of our profession are doubtless reading Dr. Moxon's denunciation of the laureate with keen appreciation. The whole of the paper is well worth reading—a remark that applies to all Dr. Moxon's writings.

The poet-laureate is not alone in attacking the profession. On taking up a religious newspaper yesterday, I found a long letter inserted in which a furious onslaught was made on doctors generally, and their treatment of hospital patients in particular. The same journal stated some time back, in an editorial on sanitation, that the doctors were anxious to bring every one under their "tyranny." Such thanks do we get for trying to check the spread of disease—a step which directly tends to impoverish us.

I saw a little time since in a radical weekly journal, in the course of a controversy then raging in its pages on the subject of vaccination, a letter in which the writer said that doctors supported vaccination because it was profitable! I was greatly tempted to write and give the obvious answer, that we certainly did not advocate vaccination on that ground, as even if it did pay, it did not pay a fractional part of what small-pox used to. Thirty years ago it formed a very important part of a doctor's practice. Now many never see a case. The recent epidemic, which began to excite some alarm, has almost subsided.

The anti-vaccinationists are very active. At Leicester—one of their strongholds—twelve hundred persons are shortly to be tried for non-compliance with the Vaccination Acts.

OUR PARIS LETTER.

(From our Own Correspondent.)

DR. BURQ AND METALLOTHERAPY—PROFESSOR BOUCHARDAT DOES NOT BELIEVE UNHEALTHY LODGINGS SO IMPORTANT A FACTOR IN THE PATHOGENY OF DISEASE AS IS GENERALLY REPRESENTED—A BLOW TO SANITARIANS—THRIVING IN SPITE OF DIRT AND BAD AIR—HOW PROFESSOR BOUCHARDAT LIVES—PARIS DRINKING-WATER UNJUSTLY ABUSED—THE CHOLERA IN FRANCE.

PARIS, August 29, 1884.

DR. BURQ, the founder of modern metallotherapy, which is also called Burqism, as you are aware, died on the 17th inst. at Bièvres, where he had gone for a holiday. He was sixty-two years of age. It is not necessary for me to enter into the peculiar notions he held respecting the action of metals in the economy, particularly those connected with the efficacy of copper as a preventive and curative agent for cholera, as they are well known. The theories which Dr. Burq had promulgated, for the first time as far back as 1852, were brought to the notice of the Paris Academy of Medicine, and although his communication was supported by Trousseau and Bouchut, it was received with little or no favor. He then retired almost into obscurity, and no more was heard of him till 1877, when he published a series of papers to the effect that the application of certain metals on the skin determined, in anæsthetic patients, and sometimes in those organically affected, certain important modifications, the principal being the return of general and special sensibility. Moreover, he added, all patients were not sensible to the same metal, and that gold, iron, and copper produced positive or negative results according to the subjects. The experiments of Dr. Burq were verified by Professor Charcot, at the Salpetrière Asylum, where this system is frequently resorted to; but I cannot say that it has been generally adopted in France or elsewhere. Like most inventors, Dr. Burq did not derive much personal advantage from his discovery, and he died almost penniless.

Professor Bouchardat does not consider unhealthy lodgings so important a factor in the pathogeny of disease as is generally represented in the profession. He believes that this idea has been greatly exaggerated, and while admitting that, all things being equal, people badly lodged contribute greatly to the general mortality, but it is only when they are at the same time subjected to the pangs of misery—which are much more terrible—insufficient and irregular alimentation, excessive work, and then alcoholic and other excesses. In a recent lecture at the School of Medicine, Professor Bouchardat developed the subject in the following terms: "It is certain that, during the night, the respiratory organs, like the other organs of the body, perform their functions less actively, and that if, outside the hours of sleep, one works moderately in the open air, the health will not sensibly suffer from the insalubrity of lodgings. The peasants are not better lodged than citizens, their food is not so good, and yet their health is more robust. Even among citizens, those who work hard, but in the open air, are less susceptible to disease than the others." M. Bouchardat cites the example of the chiffonniers who live crowded together in huts, as less affected by disease than the average of the working classes. The necessity for pulling down unhealthy lodgings to replace them by palaces is not so much felt as is represented, and even when all the lodgings are improved, the public health will not be much influenced by it, so long as the other causes of disease are in existence. The learned professor adds that it is imagined that the privies and night-soil are powerful causes of the propagation of contagious diseases in large cities, an assertion offered gratuitously and without any scientific proof, and he brings forward the sewer-men (égoutiers), the night-men, and others who work in the general deposits of night-soil (dépotoirs), the inhabitants of Gennevilliers (just outside Paris), who water their cultures with the waters from the drains of this city, which are rich in night-soil, as not offering a greater contingent of victims to contagious diseases than those who live more comfortably. In fact, Professor Bouchardat may present himself as an example of his thesis in point, as he lives in one of the filthiest quarters of Paris, in a house he has occupied for nearly half a century, and yet he has long passed his threescore and ten without having a day's illness, and he does not recollect that the inhabitants of the little street he is living in, which is a dark dirty lane in the old city, near the Nôtre Dame Cathedral, have been more stricken with disease than those of the modern palaces in the Boulevards.

With reference to the mortality of Paris being greater than that of the other cities of France, Professor Bouchardat attributes this to another cause: misery and the conglomeration of unacclimatized individuals, who for various reasons are attracted to this city, and who in the case of an outbreak of any epidemic disease, are the first to be affected. The hospitals become crowded with them, and it is by them that the mortuary list is swelled. It is thus he explains the great mortality from typhoid fever in Paris, yet it is not the less true that the causes are local.

In the debate that is being drawn out at the Academy of Medicine anent the cholera, M. Bouchardat observed that the drinking-water in Paris has been greatly and unjustly abused, particularly by foreigners. He declared that the potable water distributed in Paris, even that furnished from the Seine and canals, is excellent, and may be drunk with impunity, provided it is properly filtered.

M. Bouchardat, who seems rather inclined to be personal, again puts himself forward as an example of the innocuous influence of the Paris water, which he has been drinking for so many years, and he holds up also M. Chevreul as another example, this eminent chemist being on the eve of entering his ninety-ninth year.

The cholera is still lurking about the south of France, but the epidemic is localized in the departments in the littoral of the Mediterranean. There has been rather an increase lately in the mortality at Toulon and Marseilles, which has been attributed to the return of the fugitives and to the continued insanitary condition of these places.

PERIOD OF GREATEST RISK FROM CONSUMPTION.

To the Editor of The Medical Record.

SIR: The communication of Dr. Marsh in your issue of August 16th has come to my notice on return from vacation.

The facts and figures were not supposed to be new, nor the conclusion previously unknown, but they certainly have never been accepted as established.

Over and over again the subject has been presented in various journals, and your own issue of August 30, 1884, calls attention to the publication of an article by Dr. Baker, of Michigan, issued in 1872.

The material in my possession on the subject renders amusing the possibility of my ignorance of the views of the authors to whom your correspondent alludes; but drawing from this material, and using only such as considerable labor warranted me in believing reliable, I was struck with the aggregate force of the information, and sought to call this, and this only, to the attention of the profession

The work alluded to by Dr. Marsh, and for which the compiler is entitled to great credit, is not a private or unknown document, but an open book, issued by the Mutual Life Insurance Company for its own purposes, and for several years well known to the public, as well as to medical men, and I certainly have no desire to gain credit for what is already public property.

The reliability of figures published by Life Insurance Companies would seem to render superfluous the considerable labor sarcastically alluded to by your correspondent. Nevertheless, all the material drawn upon, and much not used, was carefully gone over, as far as the original facts were attainable, and the experience of the Mutual Benefit subjected to a like investigation; but as I did not suppose it necessary to say that the experience of the Mutual Life was compiled by other hands, so I did not suppose I was claiming credit for any others that I might choose to select as equally reliable.

Had your correspondent taken the very slight trouble to notify me by letter, or otherwise, of failure to give credit to himself or the company he represented, it would have been promptly accorded.

Dr. Baker, with becoming modesty, claims even the diagram, or a similar one, and to this originality he is welcome, if only the views presented, *old to a few, new to the many*, receive attention.

EDGAR HOLDEN, PH.D.

NEWARK, N. J.

HIPPOCAMPUS *VS.* HYPOCAMPA.

To the Editor of The Medical Record.

SIR: Among the changes from the nomenclature now in use, suggested by Wilder, is the adoption of "hypocampa" for "hippocampus." His chief reasons are the occurrence of this term in Vicq d'Azyr's work, and a morphological one to be referred to. It is difficult to see what is to be gained by this adoption of what may be the product of a typographical error in Vicq d'Azyr's work, who, quoting Arantius and Varolius as the discoverers of the hippocampus, gives "hippocampus" as the name in his glossary of anatomical terms, and *hypocampe*, with the Latin forms *hypocampus* and *hypocampi* in several figure references. The transformation of a hastily written "ip" to a "y" is a common one with printers, and may have been indulged in by the old copyists. The use of the term by the discoverer is, we think, the determining factor here. Although Arantius is not accessible to us, yet there is a very full citation of his description in that magnificent work, Burdach's "Vom Bau und Leben des Gehirns." He cites Arantius (page 45, chapter iii., of the latter's observations) as the discoverer of the *hippocampus*, and as he is exceedingly accurate in citation, his work being the most complete and painstaking bibliography of the subject of cerebral anatomy up to the year 1819 extant, it is to be assumed that he saw the original lines when he says "Arantius discovered it, and described it as a white prominence resembling a *hippocampus* or a *vermis bombycinus*,[1] which having its head in the third cavity, extends through the inferior cornu, circumscribes the crus, and ends anteriorly with a bent round tail." That some obscure resemblance of the head to the fish known as the sea-horse, or hippocampus, was before Arantius in penning this description, I think there can be little doubt.

Wilder has possibly been misled by the accepted use of the terms *pes hippocampi major* and *pes hippocampi minor*, which are both manifestly improper. On this head Burdach is again very explicit and satisfactory. He says that of the term hippocamp, by a curious misunderstanding, the authors—instancing Mayer—made *pes hippocampi*. Inasmuch as the sea-horse has no foot, either large or small, Mayer and Reil endeavored to elude the quandary, by using the term *pes hippopotami*. The question is disposed of by the adoption of "calcar" for the eminence in the occipital horn, and "digitationes" for the series of eminences in the temporal horn of the ventricles, so that hippocampus may be retained for the gross prominence of the involuted cerebral wall, as "cornu ammonis" indicates its appearance in section.

Burdach has a dozen references in his foot-notes to Vicq d'Azyr's figures, which indicate a detailed and attentive study both of these and of the text of that work. His silence on the subject of hypocampe—since he was at one and the same time an excellent classical scholar, a painstaking reader, and acquainted, as is evident, with the older literature beyond even Vicq d'Azyr—seems to indicate that he regarded it as a printer's or clerical error, and relied on the list of anatomical terms furnished by Vicq d'Azyr as the proper interpretation of the latter's nomenclatural views.

It is singular that Burdach, who in the two hundred and seventieth annotation of his second volume cites the entire literature regarding the hippocampus, and who was so thoroughly acquainted with Vicq d'Azyr's work, should fail to note Varolius as sharing in the discovery of the hippocamp, which Vicq d'Azyr maintains. Arantius and Varolius were contemporaries, both made their discoveries at Bologna, and published their treatises at nearly the same time. Of the two the great Varolius was undoubtedly the one most deserving of the title Genius, and as much in advance of his day as Willis was of his, but it must not be forgotten that Arantius was a close observer, and devoted special attention to the temporal cornua, which he erroneously elevated to the position of independent cavities, capable, as the primitive anatomy of that time permitted him to say, of taking up air! The omission of Burdach's—if it be such—is the more remarkable, as in his historical chapter, when he arrives at what he calls the "sixth period" of cerebral anatomy (1573–1641), he designates it the period of Varolius, and opens its consideration with these lines: "With deepest veneration I mention Varolius (1573) one of the greatest names which the history of our science reveals." The close of the paragraph seems to indicate that there

[1] Caterpillar of the silk-worm.

were at that time in Bologna, as to-day in New York, men whose work was done on the same plan as that shown in a recent much-criticized "Anatomy of the Nervous System." But nowhere does Burdach, although he gives a summary of Varolius' contributions, assign to him any connection with the earlier descriptions of the hippocamp. Aside from Arantius, he gives the names of the following as having variously described and interpreted this body: Marchetti, Molinetti, Duvernoi, Morand, Aubert, Winslow, Bergen, Bonhomme, Wrede, Haller, Mayer, and Malacarne. The connection of the hippocamp and the fornix was known to Arantius, who undoubtedly had a clear idea of the gross relations of these two bodies. As Burdach states, all knowledge of the hippocamp was lost after the days of Arantius, Marchetti, and Molinetti, neither Willis nor Vieussens appearing to have known of it or paid any attention to it. The discovery of Arantius was not resuscitated till the days of Morand, being buried in oblivion for nigh a century.

Let the observer look at Plate XX. of Vicq d'Azyr,[1] which represents the temporal cornua of the lateral ventricles as opened from below, and he will appreciate how the older anatomists interpreted the hippocampus. One is almost inclined to suspect that the artist—the general correctness of whose representations is remarkable—has been biassed by the name, for the denticulations of the *fasciola* (*fascia*) *dentata* and the sweep of the body of the hippocamp are made to resemble the characteristic position and the jointed scales of the sea-horse,[2] while the digitations are represented as much as possible like the head of a traditional dolphin, with a distinct eye and snout, inverting Arantius' "tail."

Had it been Vicq d'Azyr's intention to introduce "hypocampe" into nomenclature it would be certainly remarkable that, having used it in the references to Plates VII. and VIII. in a few places, he should resume *hippocampe* and *hippocampus* in the last or fonrth part of the volume. He also uses *hypocampi* as a genitive form. This strikes me as signal evidence that the "y" is a printer's error, as the correct form (as Wilder has it) would be *hypocampae*. Vicq d'Azyr's last reference to these bodies reads "hippocampe," and on one page, that relating to Plate XX., this form occurs just ten times, besides once on the following page, in the heading, as well as in the full-page title. There seems to be—taking the inconsistency of "hypocampi" grammatically, the numerical preponderance of *hippocampe* and *hippocampus* over *hypocampe*, and the way hippocampus is spelled in the glossary—no doubt that Vicq d'Azyr recognized only hippocampe as correct, and that the other form, as I have stated, is a misprint.

Of course, the attributing to the hippocamp of a "foot" was, as Burdach and Reil recognized, improper. The "pes hippocampi," resembles nothing so much as the foot of a cat with retracted claws, and I have a faint recollection of reading the synonym *pes leonis* applied to it, though I may be wrong. Seeing this resemblance, and finding that the "pes" was a part of the hippocamp, the ox and the ass were yoked together—not the first time in the history of medical and zoölogical nomenclature—and a fish became endowed with a cat's paw.

The discoverer of the hippocampus can have had only an animal resemblance in mind, or he would not have used as a second simile a caterpillar. The "ribbing" of the fasciola, suggested to his mind the jointed structure of the fish known as the sea-horse as well as that of insectean *larvæ*.

Wilder asks the question,[3] whether the denticulations of the fasciola are found in other animals than man, and whether they are recent appearances in all cases, and have been accounted for. The finest denticulations I have seen were in the hippopotamus and the common horse; they seem to be better marked in children than in adults. Meynert offers a reason for their existence, based on the alternate distribution of fibres. That they are a very widely spread character of the fasciola is shown by the following list of animals in which their presence has been distinctly noted by me: Man, orang-outang, chimpanzee, *semnopithecus*, *cercopithecus*, *macacus*, *cynocephalus*, *ateles*, hippopotamus, horse, goat, calf, sheep, and in others of which the notes are difficult of access at this moment.

Respectfully, E. C. Spitzka, M.D.

[1] Traité d'Anatomie et de Physiologie, tome premier, Paris, 1786. It may interest the student of history and particularly him who delights in detecting the sarcasm of events, to learn that this magnificent work is dedicated "to Louis XVI., to whom thirteen States of the New World owe their liberty, the sea its independence, Europe peace, France monuments of justice," etc., all of which culminated a little later on the guillotine.

[2] Hippocampus Hudsonius.

[3] In his Cartwright Lectures.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from September 7 to September 13, 1884.

Greenleaf, Charles R., Major and Surgeon. To conduct a detachment of recruits to the Department of the Columbia, and upon completion of this duty rejoin his station, Columbus Barracks, Ohio. S. O. 210, A.G.O., September 6, 1884.

Gorgas, W. C., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Randall, D. T. S. O. 98, Department of Dakota, September 5, 1884.

Egan, P. R., First Lieutenant and Assistant Surgeon. When relieved by Assistant Surgeon Fisher, to report at Fort Lowell, A. T., for duty as Post Surgeon. S. O. 82, Department of Arizona, September 2, 1884.

Macauley, C. N. B., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Sisseton, D. T. S. O. 99, Department of Dakota, September 6, 1884.

Fisher, W. W. R., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Apache, A. T., relieving Assistant Surgeon Egan. S. O. 82, C. S., Department of Arizona.

Ewing, Charles B., First Lieutenant and Assistant Surgeon. Assigned to duty as Post Surgeon at Fort Stanton, N. M. S. O. 177, Department of the Missouri, September 6, 1884.

McCaw, W. D., First Lieutenant and Assistant Surgeon (recently appointed). To report in person to the Commanding General Department of the Missouri, for assignment to duty. S. O. 209, A. G. O., September 5, 1884.

Official List of Changes in the Medical Corps of the U. S. Navy, during the week ending September 13, 1884.

Heyl, T. C., Surgeon. From the Adams to the Receiving Ship Independence, Mare Island, Cal. September 8, 1884.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending September 13, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
September 6, 1884	0	48	30	2	34	16	0	0
September 13, 1884.....	1	44	30	6	30	29	0	0
Deaths.								
September 6, 1884.....	0	18	6	2	9	9	0	0
September 13, 1884.....	1	20	9	6	14	11	0	0

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Original Articles.

A SUCCESSFUL CASE OF ARREST OF TUBAL PREGNANCY BY GALVANISM.

BY PAUL F. MUNDÉ, M.D.,

NEW YORK.

INSTANCES of extrauterine pregnancy observed at so early a period as to admit not only of a certain diagnosis, but of their successful treatment, are not so common, but that, as yet, each additional case presents features of interest sufficient to warrant placing it on record. Of late, two cases have been reported by Veith, of Berlin, of successful removal by laparotomy of the whole sac in tubal pregnancy, in the first case the diagnosis being obscure, in the second case clearly made before the operation was decided upon. It is possible that at some future time the details of laparotomy may be so simplified that a fatal termination is a rare exception ; but at the present day, in spite of Tait's wonderful results, the fact remains undisputed that every patient whose abdominal cavity is opened incurs the risk of losing her life. So long as that is the case, the majority of operators will hesitate before performing a dangerous operation, when the same result can be obtained, at least so far as a continuance of the gestation is concerned, by an entirely harmless and simple process. Whether now this process, the passage of an electric current through the gestation-sac, is so entirely harmless, and whether it can be relied upon always to arrest the growth of the ovum and its envelopes, and finally whether the ovum so arrested is a safe thing to have in the abdominal cavity *ad indefinitum*, these are points which only additional observations will decide. As a contribution to the settlement of these questions the following case is reported :

Mrs. P. A——, thirty-eight years of age, mother of one child eight years of age, one miscarriage six years previously, consulted me February 6, 1884, in order to ascertain whether she was pregnant. She stated that she had last menstruated during the last week of November, 1883, that she had had connection immediately after the cessation of the flow, December 1st, and not since, as she soon began to feel nauseated, and being afraid of becoming pregnant had avoided intercourse. Her next menstrual period, due about Christmas, passed without a show, but early in January there was some bloody discharge, although much less than usual. She also began to feel colicky pains in the lower part of the abdomen, which, together with the nausea, persisted until I saw her, and were gradually growing worse. She said that her appetite was good, but that she invariably vomited soon after eating. Morning-sickness was not specially marked. When she came to me she had just had a second scanty show of blood. For several days the abdominal pain had produced some faintness, and her weakness had increased considerably. She was a tall, graceful woman, rather thin and pale, and bore traces of suffering in her face. A vaginal examination showed the uterus pushed somewhat to the left side, but slightly, if any, enlarged, and in the right half of the pelvic cavity an oblong, irregular, deeply fluctuating mass of the size of a goose's egg, which could be slightly moved about, causing the uterus to move with it. Bimanual palpation of this mass caused intense pain, and brought on faintness and the colicky, cramp-like pains of which the patient had complained. Large vessels could be felt pulsating through the right vaginal pouch. Feeling confident that the uterus was empty, for it certainly was not enlarged to the size of a two months' pregnancy, I introduced the sound, and it entered toward the left to a depth of three inches. My already formed diagnosis of tubal pregnancy was confirmed by the appearance of the areolæ, and the oozing of colostrum from the nipples on pressure, certainly unusual except as a sign of pregnancy in a woman who had not been pregnant for six years. The breasts were not enlarged, however, although the lady said that they felt rather fuller than usual.

I explained to the patient and her husband what I thought to be the trouble, and the danger of allowing the pregnancy to proceed, and the hope I had of checking its growth by the electric current. But in order to share the responsibility, and as a guarantee of the correctness of the diagnosis, I proposed a consultation with Dr. Thomas Addis Emmet, which was readily agreed to. He saw the patient at his office the next day in my presence, and without giving him my diagnosis, which I told him I had formed the day before, he at once pronounced it to be a pregnancy in the right tube, and advised the galvanic current.

The patient had already felt considerably prostrated before going to Dr. Emmet, where she was obliged to ride in a carriage, although perfectly able to come to me the day before in the horse-cars, and after his examination she had so much pain that I prescribed a morphine suppository, to be taken as soon as she reached home. Fearing that delay might result in a rupture of the sac, I arranged to go to her residence that afternoon with my battery and pass a current through the mass. Accordingly I went there at 4 P.M., and found the lady so much prostrated, that her husband met me at the door with the words, "I fear, doctor, you cannot do anything today." But the danger of rupture was so vivid before my mind, that I preferred to run the risk of producing that rupture by the electricity, rather than what seemed to me the greater risk of allowing the sac to grow even twenty-four hours longer. Placing a leather-covered button electrode in the rectum, and the other pole by a flat sponge on the abdomen over the mass, I passed the current of my newly filled galvanic battery through the sac, gradually increasing its strength to twenty-four cells, and rapidly breaking the current a dozen times or more. The sitting lasted about ten minutes, and the shocks were quite painful. I did not think this current too strong, for I remembered that in one of the successful cases reported, McBurney's thirty-six cells had been used. I left the patient fairly comfortable, no more prostrated than before the application.

Early the next morning I was called, and when I arrived I learned that the lady, whose nausea and retching had continued all night, had sat up in bed toward morning to vomit, had been seized by a violent pain in the abdomen, and had fallen back in a faint. I found her perfectly conscious, but white as a sheet, with pinched, clammy features, absolutely pulseless at either wrist, skin cool, extremities cold. I naturally thought that the sac had ruptured ; the history and present condition clearly pointed to that conclusion. One thing only led me to doubt a rupture, and that was the strength with which the patient could turn about in bed and answer questions. It was evidently a state of collapse, but it did not seem to

me exactly like prostration from hemorrhage. I could not but hope that it might be merely shock from the repeated examinations and the galvanic current through so sensitive an organ as an over-distended tube. I made a gentle vaginal examination and found the outline of the mass as distinct as the day before. In any case, the only active measure, laparotomy, could not be carried out on a patient in so profound a state of collapse as to be pulseless at the wrists; she must simply have died on the table. Hence, if there was a rupture, all I could do was to stimulate her until she rallied sufficiently to justify laparotomy; and if there was no rupture, then that operation was not indicated. I therefore ordered hypodermics of brandy, each containing five minims of arom. spir. ammonia, one to be given every fifteen minutes in different parts of the body (the patient's stomach would retain absolutely nothing), sent for a nurse, and went home for my laparotomy instruments, in case at any moment they should be required. The physician who was hurriedly called in, and whom I found at the bedside when I arrived, Dr. Black, of the United States Army, on leave of absence and temporarily residing in the neighborhood, kindly stayed with the patient, and was relieved later by my assistant, Dr. E. H. Grandin. On my return several hours later, I found the condition unchanged. The hypodermics were continued during the day, some fifty in all being given.

During the afternoon, while on my way to Mount Sinai Hospital, where I was to operate, I met Dr. Charles K. Briddon in the car, and remembering his recently reported case of laparotomy after rupture of a tubal gestation-sac, related my case to him, and the doubt I was in as to whether rupture had occurred, and whether I should operate or await developments. He strongly advised me to operate at once in spite of the collapse, saying that his patient also was pulseless, but that after the operation her pulse rose. I decided to wait, however, still feeling that, after all, it might be nothing but shock.

The next morning there was a faint trace of pulsation at the wrist; gradually it increased, and we began to hope; the retching diminished and the patient could retain cracked ice. Her abdomen was very sore, and she complained a great deal of colicky pains on the right side. To make a long story short, she gradually rallied, began to retain nourishment, and in a week was able to sit up in bed, and in two weeks lie on a lounge. The sac had become somewhat harder, fluctuation was less distinct, pulsation had disappeared, but the mass was not perceptibly smaller. The breasts had become flabby, but they still secreted colostrum. Although there could not be any reasonable doubt of the death of the fœtus after such a series of galvanic shocks, still, to make sure, I thought it best to pass the faradic current through the sac a number of times, and beginning on the sixteenth day after the galvanic sitting, I made six faradic applications to the sac, one pole in the vagina, the other over the mass on the abdomen, using the full strength of a Kidder tip-battery and frequently breaking the current. One sitting per day was given, lasting about fifteen minutes. This treatment caused no pain or shock whatever. From this time on the patient improved rapidly, regained her flesh and color, and by the end of the fourth week was able to go out. The colostrum gradually disappeared from the breasts, but the sac diminished very slowly, so that when I last saw her at my office on May 19th, three months and a half after the galvanic shock, it was certainly still two-thirds as large as at first, although perfectly solid. All pain in it had ceased before she was allowed to go out. Menstruation reappeared on April 12th, and again on May 7th, lasting seven days. The uterus was measured and found to be two and three-fourths inches deep. The lady left for Europe on May 21st in perfect health, and without a complaint of any kind, and is still abroad.

The special points of interest in this case are: first, the occurrence and recognition of the nature of the collapse after the galvanic sitting; and second, the kind of current which should be used, the galvanic or the faradic.

1. As regards the collapse, I have no doubt that it was due to the violent galvanic shocks passed through a highly sensitive organ, at that time even more closely connected than usual with the sympathetic system, and that the previous examinations had already paved the way for such an occurrence.

The recognition of the cause of the collapse was not easy, and I confess that I expected all during that 7th of February to be called upon at any moment to do laparotomy as a last resort. But I wish again to call attention to the one symptom which led me to defer operating, and which, giving it its correct interpretation, as I chanced to do, saved the patient's life, namely, her singular physical strength, while pulseless at either wrist and evidently collapsed in the highest degree. Had I not considered this persistence of voluntary muscular power incompatible with the loss of so great an amount of blood (intra-abdominal, of course) as would produce so severe a collapse, I should probably have done what was the only other thing to do but wait, that is laparotomy, which I do not think the patient would have survived.

2. My experience with the galvanic current in this case leads me to prefer the faradic, which has been successfully used by Landis, Allen, Garrigues, and others, without any of the shock or pain experienced in my case. I do not attribute the shock entirely to the character or strength of the current, for there was undoubtedly some present before it was used, and I am disposed to believe that rupture was impending or had already begun; but I doubt if the shock would have become so severe if I had used the faradic current. But the faradic will need to be repeated frequently and at short intervals to insure success.

Whether the encysted ovum ever gives rise to subsequent trouble by suppuration or septic infection I do not know. As no such result has been mentioned in the reported cases, I suppose it is fair to assume that its growth once arrested it simply shrivels, mummifies, and is no longer recognizable except as a small hard lump, causing no inconvenience whatever.

Although I have heard incidentally of one or two other unpublished cases of extra-uterine pregnancy checked by electricity, I believe this is the twelfth case on record, the eleven others having been reported by Garrigues in vol. vii. of the American Gynecological Society's Transactions.

20 West Forty-fifth Street.

The newspapers state that two persons, one of whom was a physician, have surrendered themselves to the authorities of Norristown, Pa., and have admitted the stealing of the body of John May, a murderer and suicide, from the cemetery at that place. The purpose for which the body was taken is not mentioned, but it was doubtless for dissection. An act of this sort is certainly criminal, but it is interesting to note the trouble the old law-writers have had in determining exactly what kind of a crime it was. They early came to the conclusion that it was not theft, because a dead body could not be property, and no one could be said to have ownership in a corpse. In one case, however, it was held to be robbery, because the grave *clothes* were taken as well as the corpse. In more recent times, the act has been regarded as one against the public instead of an individual, and heavy penalties have been prescribed against those who wantonly open a grave. At the same time most States and communities have laws by which the bodies of unknown and friendless persons are given to hospitals and medical schools for dissecting purposes. Such laws will not, however, permit the removal of the unknown dead from cemeteries where they have been interred in the usual way. Removal secretly of the bodies of such persons is as much an offence as that of persons who are well known and have died surrounded by their friends.

TYPHUS FEVER, AS IT OCCURRED IN AN EPIDEMIC AT THE PHILADELPHIA HOSPITAL, WITH A CONDENSED REPORT OF NINETEEN CASES.

By LLOYD NORRIS HORWITZ, M.D.,

LATE RESIDENT PHYSICIAN TO THE PHILADELPHIA HOSPITAL, PHILADELPHIA, PA.

Although this report embraces but the record of nineteen cases, yet the writer's conclusions and remarks are founded on the close observation and post-mortem examination of over forty cases which occurred in the wards of his colleagues Drs. Elder and Gotwald.

This epidemic of typhus fever began about March 1, 1883, and lasted with more or less severity until June of the same year, and was then only checked by the strict prophylaxis employed by the physicians at the hospital, assisted by the hearty co-operation of the Board of Health, as the contagious, infectious, and epidemic character of the malady, in the writer's opinion, was clearly proven by the cases which fell under his direct observation.

Case I.—F. W——, white, aged thirty-four, admitted to the hospital March 2, 1883, was the second case of typhus fever of the epidemic. Precisely like four-fifths of all the cases admitted, he came from a locality in this city noted for its filth, its unhealthy and unhygienic surroundings, and for the squalor and poverty of its inhabitants, namely Alaska and St. Mary's Streets and the numerous courts and alleys immediately adjacent.

Although no satisfactory history of this case could be obtained, owing to the patient's semi-delirious condition, still, judging from his symptoms, he must have been suffering between five and six days before he was brought to the institution.

The patient was decidedly emaciated; his tongue was of a brown dusky hue, but red at its tip; the teeth were covered with sordes, and the breath was peculiarly offensive. The chest and lateral aspect of the body as well as the lower portions of the thighs were quite thickly covered with the characteristic eruption of typhus. The urine was scanty and high colored, and voided with much difficulty; the bowels were loose, and of a fetid character, a condition in the writer's experience almost as common as that of constipation. The temperature, as in all cases of this epidemic, was exceedingly high, it being at the time of his admission 105⅘°. The delirium was of a low, muttering type, and continued so until the beginning of the third week, and indeed it may here be remarked that this is the characteristic delirium of the disease, the busy, violent delirium being rarely seen.

The writer has left to the last what, in his opinion, was one of the most, if not the most valuable diagnostic symptom of the disease, namely, muscular and osseous hyperæsthesia and tenderness on pressure; for no matter in what condition of comatose insensibility was the patient, cries of pain could readily be elicited by even slight pressure over the tibia, ulna, humerus, or any of the subcutaneous bones.

The peculiar typhus odor from the skin and breath, referred to by some authors as so characteristic of the disease, is, in the writer's opinion, of but little value, it often being entirely absent, as was the case with this patient, and when present was in no way distinguishable from the ordinary smell of the sick ward, and the writer may also add in this connection that the characteristic eruption of the disease lends but little diagnostic aid to the practitioner, both on account of its frequent absence, and from the protracted delay in making its appearance, and as proof of this would cite the nineteen cases of his own, in which but ten showed any eruption whatever, and in two of these the eruption did not make its appearance until the eighth day of the disease. In the cases treated by my colleagues, above referred to, the eruption was as frequently absent or protracted in its appearance as in those here recorded.

The patient remained in the condition described until the fifteenth day of the disease, or nine days after his admission, when convalescence commenced, the fever and delirium lessening, diarrhœa becoming checked, the tongue cleaning up, and strength returning.

It may be here remarked that the overwhelming muscular prostration attending the cases constitutes one of the most important factors of the disease, and is even greater than that which attends typhoid, although convalescence takes place with much greater rapidity in typhus.

At the beginning of the fourth week the man was able to move about the ward, still quite weak. A few days later he was sent to the convalescent ward, cured.

Case II.—J. J——, colored, aged sixty, admitted to the hospital March 7, 1883. This case is of interest principally on account of its rapidily fatal termination; the patient having died thirty-six hours after his admission.

The history of this case, like the former, was very unsatisfactory; the ambulance doctor being unable to learn anything from the sick man's drunken and bestial companions. (It may be remarked, *en passant*, that there were no less than twenty-eight human beings living in a three-story wooden boarding-house in Alaska Street, from whence he was brought). However, in the opinion of Dr. Bruen and the writer, it was one of those fulminating cases of typhus fever, which afterward proved by no means of rare occurrence during this epidemic.

The man was in a completely comatose condition, and could only be aroused for a moment by pressure on the extremities; the tongue and teeth were in the usual condition found in these cases; the pulse hard and very rapid, showing 135 beats per minute; the temperature the highest of any case that came under my observation, the thermometer 106⅘°; and finally, on examination of the bladder, it was found to be greatly distended with urine, which necessitated the use of the catheter; the operation having to be repeated when necessary up to the time of the patient's death. This retention of urine was found to be generally diagnostic of a very severe case, it having occurred in every fatal instance.

On post-mortem examination the viscera were found to be congested, but otherwise in a normal condition; this condition was particularly noticeable with the kidneys. The intestines were carefully examined, and no point of ulceration could anywhere be detected, but the peculiar and *characteristic* "shaven beard" appearance of the mucous membrane was noticed in spots throughout the whole length of the ilium. The precise nature and microscopical anatomy of this morbid condition has not to my knowledge been definitely described by pathologists, but the practical fact remains that it was noticed in every instance in which a post-mortem examination was held.

Case III.—J. M——, white, aged fifty-five, admitted to the typhus ward March 24, 1883. This patient was recently convalescent from a severe attack of facial erysipelas in one of the wards of the hospital when stricken with typhus fever.

His condition from the onset was grave, the fever being ushered in with a series of severe chills, and intense nausea; the latter symptom continuing for the first thirty-six hours of the disease. All the symptoms of typhus were well developed in this case; the eruption appearing quite copiously on the fifth day.

Nothing beyond the persistent nausea was noticed which would invest this case with any particular interest. Death ensued on the eighth day. The autopsy revealed precisely the same pathological conditions as seen in Case II.

Cases IV. and V.—John J——, thirty-eight years of age, and Wm. J——, thirty years of age, both white. They were admitted to the hospital on the same day, and were brought from the same house on Alaska Street.

They both gave as a history of their cases a feeling of great lassitude, weariness, and a condition of general malaise for several days prior to the attack, and the man J. J—— had a severe chill while being conveyed to the

hospital in the ambulance. The eruption did not appear in the first case until the seventh day, and was then so slight as to be recognized with much difficulty, while in the second patient there was no perceptible eruption whatever.

It is a curious fact, but one well borne out by the writer's experience in this epidemic, that in these cases in which the eruption was slight or altogether absent the temperature and all other symptoms were increased in severity. This fact was well illustrated in these two cases, in which all symptoms were of the gravest character. Constipation was marked in the first case, but the bowels were rather loose than otherwise in the second.

The second case died on the ninth day in a state of complete coma; the first, however, recovered after a protracted illness and a tedious and slow convalescence.

The autopsy held on the second case revealed precisely the same morbid conditions as in Cases II. and III.

Case VI.—John L——, sixty-five years of age, white, admitted to the hospital March 30, 1883. This patient was also brought from the same infected locality as the preceding ones. There was at the time of his admission a slight typhus eruption scattered over the trunk, which increased greatly in the next twenty four hours, and turned to a dark black color a few hours before his death. The thermometer showed a temperature of 104⅕°, the significant brown tongue and an unusual degree of hyperæsthesia of the muscles and bones were present, with extreme prostration and low delirium. He lingered in this condition for two days, when he died.

On post-mortem examination the viscera were found to be more than usually congested, especially the lungs. The same pathological changes were found in the intestines as in the preceding cases.

Case VII.—Thomas R——, twenty-eight years of age, white, admitted April 2d. The diagnosis of this case was for a time involved in some doubt, as in its early course it closely resembled typhoid fever, but the appearance of the eruption on the fifth day, the peculiar brown tongue before described, and the muscular hyperæsthesia, made the diagnosis at that time positive. The attack was comparatively light, the temperature never reaching over 102½°; the muscular hyperæsthesia being not so well marked as in graver cases, and the patient being able to be aroused from his stupor from time to time.

Convalescence set in toward the end of the third week, and complete recovery quickly ensued. The return to health and strength, as in most cases of this disease, was quite rapid.

Cases VIII. and IX.—Charles A——, thirty-two years of age, and Joseph P——, thirty-six years of age, both colored, the former admitted March 30th, the latter March 31st. They were brought from the same shanty, situated in a small alley running off Alaska Street, and according to their own statements they were both taken sick about the same time. The first case was of that fulminating character described in a former patient, and he died in a state of complete coma on the fifth day after his admission. The retention of urine and his profound comatose insensibility almost from the onset of the attack formed the two most prominent symptoms of the case; constipation, muscular, and osseous hyperæsthesia were present in a marked degree. The autopsy revealed the usual congestion of the viscera and the "shaven-beard" appearance of the mucous membrane of the ilium. The brain was found in a normal condition, except a slight increase in the "puncta vasculosa."

The second case was of a light character, and was analogous to Case VII. The individual was completely convalescent by the fourth week, and his subsequent recovery was rapid.

Case X.—Joseph D——, thirty-six years of age, white, admitted April 2, 1883. The patient gave a history of prostration and fever for three days prior to his entrance into the hospital. When first seen no eruption could be detected on any portion of the body, but on the fifth day of the disease, or two days after his admission, a few spots were noticed on the lower extremities; all the other symptoms of typhus fever were well marked, except, instead of constipation being present, the bowels were loose, the patient having from three to four passages daily, and the fæces being of a fetid character and of a spinach-green color; precisely similar in looks to that of Case II. There was also present from the very onset of the disease a peculiar symptom, and one not very frequently seen, namely, intense nausea and vomiting, the ejecta varying in color from a dirty brown to a pea-green. This symptom lasted without any abatement up to the time of the patient's death, which occurred forty-eight hours after his admission. The temperature was very high from the beginning, the maximum point reached by the thermometer being 105⅘°; the muscular hyperæsthesia was well marked, but the delirium and coma were not as great as we should have been led to expect from the gravity of the other symptoms. Retention of urine was also present.

On post-mortem the viscera were found to be all deeply congested. The stomach showed decided evidences of chronic gastritis, superinduced no doubt by the patient's intemperate habits. The liver was in a far advanced stage of "interstitial hepatitis." The ileum showed in many places the "shaven-beard" appearance of the mucous membrane.

Case XI.—John W——, twenty-six years of age, colored; admitted to the hospital April 7, 1883. The patient was a pauper inmate of the institution when attacked by the disease, and as an assistant attendant in the typhus wards, was directly exposed to contagion. The writer would here mention that this was by no means the only case of typhus fever which arose from contact with the sick, for the two men whose duty it was to carry the patients from the ambulance to the wards, and the dead to the dead-house, both contracted typhus fever, and one died. This patient was first seized with a well-marked chill, followed by some nausea, the temperature quickly rose, until at the beginning of the third day it reached 103⅘°. The delirium, which was at first but slight, increased in severity up to the fifth day; it was not of the usual low character, but was of the active, busy type sometimes seen in typhoid fever. The bowels were exceedingly constipated, and the urine scanty, and of a high color, containing a small amount of albumen; a condition of rare occurrence in this epidemic, not even a trace having before been detected in the twenty-seven cases whose urine the writer examined.

It is proper to state that this condition of slight albuminuria was not a constant feature even in this case; it disappeared on the eleventh day, and did not again return.

The hyperæsthesia was well marked and persistent, the pulse hard and rapid, and the tongue cracked and fissured in numerous places, of a dark brown hue with a red and angry-looking tip.

These symptoms continued with more or less severity until the thirteenth day, with exception of the temperature alone, which was reduced to 101⅘° by the sixth day, above which point it never again rose. Immediately a decided amelioration in the symptoms occurred, and by the end of the third week convalescence was fully established. Some ten days later the patient was discharged cured.

Case XII.—George H——, aged nineteen, white, admitted April 15, 1883. This was the only patient of the nineteen which fell to the writer's care (exclusive of the two which originated in the institution) which did not come from the infected locality of the city so often referred to in the preceding pages.

The patient was of respectable parentage, and as far as could be determined was under good sanitary and hygienic surroundings prior to his attack. His illness dated about four days prior to his admission to the hospital,

and was attended by a physician in the northern section of the city, who recognized the nature of the case and by whose advice he was sent to the hospital. When first seen he was in a state of profound coma; the eruption, although not abundant, was still quite noticeable on the abdomen and lower extremities; the hyperæsthesia of the muscles quite distinct; the pulse rapid, but weak and feeble, and the temperature registered 104⅘°. The breath was very fetid, the teeth covered with sordes, the tongue dry, cracked, and of the usual dark brown hue almost to the tip. The bowels were costive, and the urine had to be drawn off by the catheter.

The patient rapidly and progressively grew worse, the coma deepened, the respiration became more and more shallow, the heart's action more feeble, and death finally occurred some thirty hours after his admission.

The autopsy revealed deep congestion of all the viscera, particularly of the lungs and kidneys, and the characteristic pathological appearances were noticed in the ilium. The condition of the brain was normal, except a slight increase of the "puncta vasculosa." The cerebro-spinal fluid was about normal in quantity.

Case XIII.—George A——, aged forty, white, admitted April 26th. A pauper inmate of the out-wards of the Almshouse, who, as far as could be learned, had not been directly exposed to contagion. His case proved to be of a lighter type than usually seen during this epidemic, and although all the symptoms of typhus fever were present, still they were all of a mild degree. The eruption occurred late, and was very light. He became convalescent about the fourth week and soon after was discharged cured.

Case XIV.—Thomas McG——, aged fifty-one, white, admitted May 3d. No history of this case could be obtained from the patient, owing to his condition, but his friends living in the locality from which he was brought (Seventh and St. Mary's Streets) told the ambulance doctor that he had been in the condition in which he then was nearly three days. This case differed in no respect from other severe ones of the epidemic, except that the fever was protracted to the end of the fourth week, and convalescence was extremely slow, it being nearly two months before he was able to walk even a short distance unassisted. Diarrhœa was present up to the end of the third week.

Case XV.—Charles S——, aged forty-three, white, admitted May 21st. The disease as in many others cases during this epidemic was ushered in with a severe chill. The temperature arose on the third day to 103⅘°, and remained at that point until the fifth day, when for one day it slightly declined. The pulse was hard and rapid, registering with but little variation about 138 beats per minute. The delirium was of a more violent type than usual, and continued so up to the time of his death. The urine was scanty and high colored, rich in urea and the urates, a few tube casts being also noticed. The bowels were rather loose, and the fæces of a dark green color and very fetid. The eruption, which was quite copious, made its appearance on the fifth day. The exhaustion and debility of the patient was very marked, and the emaciation was undoubtedly greater than presented by any other case of the epidemic; this might be accounted for by the exhausted constitution of the patient prior to the inception of the disease.

After the fifth day the man began rapidly to grow weaker and weaker, the stomach rejected both food and medicine, except in the minutest quantities, and the temperature, despite all remedies, remained at 105°. He died on the ninth day in a state of complete coma.

On post-mortem examination the viscera, as in the other cases, showed evidences of deep congestion; the intestines revealed the characteristic "shaved beard" appearance of the mucous membrane; the kidneys were far advanced in parenchymatous nephritis, and the brain, beyond a slight superficial congestion, showed no abnormality.

Cases XVI. and XVII.—Patrick S—— and Michael McG——, aged respectively thirty-nine and twenty-eight, white, both admitted May 26, 1883. Both cases, as far as could be ascertained, were taken ill about the same day, and were brought from the vicinity of Sixth and Lombard Streets. The eruption appeared in both men on the seventh day, quite plentifully in the first patient, but rather scanty in the second; the temperature was never very high in either—the maximum being 102.⅘°; the delirium was not marked, and by the twelfth day their intellects were perfectly clear. The bowels in each were inclined to constipation. At the end of the fourth week convalescence was fully established, and soon after they were discharged cured.

Cases XVIII. and XIX.—Nothing of particular interest was noticed in either case, all the symptoms being well developed, but of a light type. Recovery occurred in both cases toward the end of the fourth week.

The writer has postponed a recapitulation of the treatment of the cases presented in this epidemic until the symptoms and pathological conditions of each could be given in detail; for the treatment pursued, with but few exceptions to meet certain emergencies, being well-nigh similar, it would be a work of supererogation to state it *in extenso* in each case.

From the very commencement it was found necessary to stimulate and support the patient, attention at the same time being given to the secretions, and means taken to arrest hyperpyrexia and hold in check excessive delirium. Free stimulation with whiskey or brandy, preferably the former was necessary from the onset, and the amount required was found to be about one ounce every three hours for the first three days, and subsequently increased by giving the same quantity every two hours, and as convalescence became assured the interval was again lengthened. There can be no doubt that our chief remedial agent in this epidemic was alcohol, and without its use the mortality would have been greatly increased.

Much attention was paid to the administration of easily digested and nourishing food. A strict adherence to a liquid dietary is not necessary, indeed occasional indulgence in easily assimilated solid food is not only beneficial but strongly indicated. Milk, eggs, strong animal broths, arrowroot, rice, etc., were administered with regularity, the patient taking nourishment in some form every two hours by day, and three hours by night, even arousing him from sleep for the purpose. Small amounts of solid food, as finely chopped sweetbread, rare tender beef, or chicken, were occasionally given, but care was exercised that nourishment, whether liquid or solid, was taken only in small quantities at one time.

Aconite and veratrum viride have been recommended by some authorities as the most useful and potent remedies we possess for the excessive hyperpyrexia, and although the writer does not for a moment deny the wonderful power of these two agents in controlling cardiac action and reducing the temperature of the body, nevertheless in his experience they have both proven entirely too depressing in their action for a disease of this character. The use of quinine in ten-grain doses four times daily, along with the following prescription, is attended with much more beneficial results:

℞. Tincturæ digitalis..... f℥ ij.
Spts. æther. nit..... f℥ jss.
Liq. potass. cit.,
Liq. ammon. acetat.....āā f℥ ji.
Aquæ.....q. s. ad f℥ vj.
M. Fiat mistura. Sig.—Tablespoonful every three hours.

These remedies along with frequent sponging with cool water, a small amount of vinegar or bay rum being added, seldom failed in the experience of the writer to reduce the highest temperatures.

Some authors have recommended in cases of great and persistent hyperpyrexia the immersion of the patient in a

cold bath ; but this is, to say the least, a practice attended with the greatest danger, and should only be resorted to in the most desperate cases, and then only when all other means have been tried and failed. The writer employed the cold bath treatment but in one case, and then only used it after having tried all other remedies without avail. The beneficial effects of the bath were very transient ; a reduction of 2½° having occurred immediately after the immersion, but scarcely had a half hour elapsed before the thermometer registered ½° higher than before the bath. The operation was, however, repeated, but with the same unsatisfactory results.

Chlorine water was extensively employed by Dr. Ludlow in his cases, but with no very encouraging results, although in a few instances it was claimed that considerable benefit was derived from its use. It is an old remedy for the disease, and was originally brought forward on account of its supposed specific effects ; but the history of this epidemic, as well as those which have preceded it, conclusively prove that there is no specific for typhus ; or in other words, therapeutists have not yet discovered any article that may be considered directly antagonistic to the disease. The sulphites have also been employed as supposed specifics, but with the same results. Chloral and bromide of potassium, in a mixture containing ten grains of the former to twenty grains of the latter, proved very efficacious in abating the delirium when active and exhaustive to the patient. The writer exclusively used a combination of the oleoresin of lupulina, ℥ xv., and the tincture of cannabis indica, ℥ xx., for such cases, and can testify to its great utility. Belladonna is also strongly recommended by some authors, and is particularly advantageous in those cases characterized by low muttering delirium. Opium should, as far as possible, be avoided in all cases. If constipation is persistent, an occasional laxative should be employed, and the writer knows of none which so well answers the purpose as the ordinary sulphate of magnesia, or Epsom salts. The use of the mineral acids, especially nitro-muriatic, in ten-minim doses is possibly of some utility, and may be combined with the quinine treatment referred to above. If, as sometimes occurs, the kidneys cease to excrete the proper amount of urea, and as a consequence uræmic coma is threatened, sinapisms over the renal region, and vesication of the nucha are called for.

Bed-sores, which frequently occur during the course of the disease, are beneficially treated at first by a lotion of alcohol and alum, but when fully developed carbolized oil is best used instead.

In view of the contagious character of the disease, typhus cases should not be treated in hospital wards with other patients. If overcrowding be prevented and free ventilation secured, the fever miasm is not as easily generated, nor is the disease as likely to be communicated. Extreme cleanliness, both of the patient and the wards, along with the free use of disinfectants, such as carbolic acid and chlorinated lime, are hygienic measures of great importance.

Mortality.—Although the average mortality is generally placed at from eighteen per cent. to twenty-five per cent., in this epidemic it reached at least thirty-three per cent., but as age greatly modifies both the prognosis and mortality (the disease not being a very fatal one before the twentieth year), and as seventy-five per cent. of all our cases were between thirty and thirty-five years old, and many ranged between forty-five and fifty-five, a very important factor in increasing the mortality of this epidemic was thus produced. It is also but just to say that at least nine-tenths of all our patients were persons debilitated and exhausted by every vice, and most of them exposed from childhood to most unhygienic surroundings.

Chemical Euphemism.—Few people are aware, or seriously consider that when they take a cup of tea it is essentially an aqueous solution of trimethylxanthine ($C_8H_{10}N_4O_2$) which they are drinking.

CEREBRAL LOCALIZATION—THE CENTRES FOR VISION.

By PHILIP ZENNER, A.M., M.D.,

CINCINNATI, O.

(Continued from p. 235.)

Pathological data.—Our investigations in this third line of research will not lead us to as exact results as either our anatomical or physiological studies. But they are, nevertheless, the most valuable in promoting the main object we have in view, cerebral localization in man, and are quite sufficient to arrive at definite results.

Impairment of vision may be caused by lesions of any part of the intracranial visual apparatus, or by lesions of indifferent portions of the brain, as optic neuritis so frequently attends any coarse cerebral disease. But as we are seeking for the centre of vision in the cerebral hemispheres, visual disturbances will only interest us where they appear to be directly produced by lesions of limited portions of the hemispheres. To obtain such cases we must be able to eliminate general causes, as, for instance, optic neuritis, dependent upon increased intracranial pressure, and the visual symptoms produced by involvement of the more peripheral parts of the visual apparatus, the optic nerves, chiasma, and tracts, and the basal ganglia, optic thalami, corpora quadrigemina, and geniculate bodies.

A number of such cases have been reported. In all of them there was disease of the occipital lobes, the part which we have already been taught to consider the chief, if not the only seat of the centre for vision.[1] In all of these cases the same kind of disturbance of vision was found, loss or impairment of vision on one side, homonymous lateral hemianopia.[2]

As this symptom is so important for us in this connection, we will dwell briefly upon it. There is an obscuration or entire defect of one-half, or approaching one-half, of the field of vision, due to a loss of sensibility on the corresponding sides of both retinæ. Lesions of one hemisphere cause loss of sensibility of the retinæ on the same side, and blindness in the field of vision of the opposite side. Thus a lesion in the left occipital lobe is attended by paralysis of the left half of each retina, and blindness of the right half of the field of vision, or right hemianopia. It is to be remembered then, when we say right or left hemianopia, we are describing the side on which the patient does not see, and that it betokens disease of the opposite side of the brain.

Of the cases of disease of a cerebral hemisphere with accompanying hemianopia some cannot be utilized for our present purposes for reasons already mentioned, because the disease is very extensive, and especially because it involves the basal ganglia,[3] or because there were at the same time changes in the optic nerves ;[4] others, because the lesion was of too recent date,[5] or because the examination was not made with sufficient exactness, or, at least, was not sufficiently detailed in the report.[6]

We will proceed to the mention of the individual cases which can be utilized in the present investigation. Each one will be given as briefly as is consistent with our present object.

In a case of Baumgartner [7] a complete left hemianopia appeared suddenly and remained until death. The post-mortem examination revealed "an old apoplectic cyst,

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[1] There is, so far as I know, but one apparent exception to this statement, a case of Hugenin (Ziemssen, xi., p. 816), where a lesion was found only in the anterior part of the parietal lobe. But as the disease extended into the subcortical medullary matter it probably reached to the optic radiations.

[2] The terms hemiopia, hemianopia, and hemianopsia are all used to express the same condition. The oldest one, hemiopia, is becoming less and less used. The term hemianopia will be alone used in this paper.

[3] Cases of Pooley (Archives of Ophth., v., p. 148) ; Yetter (Dent. Archiv. f. kl. Med., xxxii., p. 597) ; Hosch (Zehnder's Monatsblatt, 1878, p. 285) ; Wernicke (Gehirn Krankheiten, ii., p. 70) ; Prevost, Fritsch, Chaillou, and Chvostek (cited by Wilbrand, Ueber Hemianopsie).

[4] Cases of Jany (Archives of Ophth., xii., p. 232) : Haab (Zehoder's Monatsblatt, 1882, p. 143. ; Griesinger (Wilbrand, p. 154).

[5] Case of Dmitrowsky (Wilbrand, p. 139).

[6] Cases of Lewick (American Journal of the Medical Sciences, 1866, p. 413) ; Nothnagel (Topische Diagnostik, p. 411) ; Fritsch, Traube, and Pütscher (Wilbrand).

[7] Centralblatt f. d. Med. Wissenschaften, 1878, p. 369.

the size of a walnut, in the right occipital lobe. Its inferior wall was separated from the cavity of the right posterior cornua by a layer of healthy tissue several millimetres in thickness. The superior wall was formed by the three occipital convolutions, which were altogether softened. There was also a focus of softening, the size of a pea, in the roof of the left anterior cornua, and an apoplectic cicatrix, scarcely half the size of a lentil seed, in the centre of the right thalamus. Optic nerves, tracts, and chiasma, and geniculate bodies and corpora quadrigemina were normal." The lesions in the thalamus and anterior cornua may be ignored, as we know they could not have produced the symptoms. We need not, therefore, hesitate to conclude that the hemianopia was here due to the disease in the occipital lobe.

A case of Westphal [1] had occasional attacks of unilateral convulsions for a number of years before death. He had also a complete left hemianopia. The post-mortem examination revealed a focus of softening in the right occipital lobe, which extended into the parietal lobe and the bordering temporal convolution. The softening was in the medullary substance, the cortex being unaffected. The motor regions of the hemispheres, the internal capsules, large ganglia, and optic tracts were normal.

In a man of seventy-two, reported by Marchand,[2] with complete left hemianopia and hemiplegia there were found destructive changes in the occipital lobe, and also a degree of softening of the cortex in parts between the occipital lobe and the fissure of Rolando.

In Curschman's [3] case there was complete left hemianopia without other cerebral symptoms. Post-mortem examination revealed "a large focus of softening in the right occipital lobe, which reached to the surface, chiefly in the superior surface and apex of this lobe." Rest of brain normal.

In a case of Haab [4] a woman of sixty-one, had complete left hemianopia, with scarcely any other cerebral symptom, for one year before her death. On post-mortem examination there was found softening of the right occipital lobe, especially its median surface. The cortex was chiefly affected, but the softening extended deeply into the medullary substance, though it did not reach as far as the posterior cornua.

The foregoing cases prove that hemianopia may be produced by disease of the hemispheres which does not involve the primary visual centres (optic thalami, geniculate bodies, and corpora quadrigemina) or the more peripheral visual apparatus. They prove also that this symptom is caused by disease of the cerebral cortex. For, though in all of these instances the subcortical medullary substance was affected, we know that nerve-fibres are not centres for functions, that they merely serve to convey impressions and impulses; and that, therefore, in the above instances their involvement could only have produced symptoms through cutting off the communication with the cortex.

The cortex, then, is the centre for sight. But to what part of the cortex this function belongs is not so definitely answered by these instances, for we cannot say to just what extent the symptom was here due to destruction of the white subcortical substance, nor do we know in exactly what area of the cortex the destroyed fibres found their final distribution. But as in these instances the disease was chiefly or entirely in the posterior parts of the hemispheres, it is rendered probable from them that the cortical visual centre is in the posterior part of the brain. This conclusion is further corroborated by other and more striking instances. But before considering the latter we will briefly mention a few reported cases which, though less convincing than those just given, still have some weight in the above conclusion.

In a case of Stenger,[1] with occasional left-sided convulsions, temporary left hemiplegia, and left hemianopia, which remained permanently during the last six months of life, there was found, in addition to an internal hydrocephalus and slight general charges in the brain, decided lesions in the right occipital and parietal lobes.

In a second case of Stenger [2] there were occasional unilateral convulsions, right hemianopia, first observed four months before death and remaining permanently, and about one month before death also a left hemianopia, so that the patient was now completely blind. The post-mortem examination revealed slight general changes both in the meninges and in the brain, and decided atrophy of both occipital lobes, that in the left being apparently of older date.

In both of these instances the general changes in the brain, as well as the clinical histories, were like those of general paralysis. But inasmuch as in general paralysis the pathological changes are usually slight, and the localizing symptoms slight and transitory, and in the above instances the visual defect was both complete and lasting, and the only decided lesions those in the parts mentioned, it is highly probable that these lesions and symptoms were in direct relation with each other.

In a case of Wernicke,[3] there was, in addition to certain disturbances of speech, a right hemianopia, which existed for twenty months before death. There was found extensive disease of the left hemisphere. The rest of the brain appeared to be normal excepting that a part of the left corpus striatum was softened, and the optic thalamus seemed a little reduced in size.

The lesion in the corpus striatum could not have produced hemianopia, and the changes in the thalamus were apparently too trivial to account for the visual disturbance.

In Nothnagel's [4] case there was right hemianopia and extensive destruction of the cortex of the left occipital lobe. But there were also motor symptoms and lesions in the anterior parts of the brain, so that the observation has only a problematic value.

In a case of Jastrowitz,[5] with right hemianopia (fundi oculi normal), a large part of the posterior part of the left hemisphere was destroyed by a tumor, which reached to the level of, but did not implicate, the optic thalamus. The rest of the brain, ganglia at base, optic tracts, etc., was normal.

There might be some hesitancy in admitting this case as evidence, because of a tumor which usually produces general symptoms, symptoms due to increased intracranial pressure. But hemianopia is a symptom of such local significance, and there is nothing to explain it in this case but the local lesion, so that this case has probably as much value as those just preceding it.

The five cases just given, notwithstanding the impossibility of definite conclusions where each one is critically examined by itself, have still, when taken together, a certain value in the solution of our problem.

Of far more value, perhaps the most valuable of those yet recorded, is the case to be now mentioned, the second one of Westphal, reported in the *Charité Annalen*, 1882.[6] In this case there was, in addition to occasional right unilateral convulsions and disturbances of speech, an impairment of the muscular sense in the right arm and hand, and a right hemianopia, which existed from the time of the first observation, October, 1879, to the time of death, December, 1881. There was found, post mortem, disease of the cortex over the greater part of the occipital lobe, the parietal lobe, including the posterior central convolution, and a small part of the temporal lobe. The disease did not extend into the subcortical medullary substance.

[1] Charité Annalen, vii.; cited by Wernicke, Gehirnkrankheiten, ii., p. 195.
[2] Archiv. f. Ophthal., xxviii., 2.
[3] Centralblatt Augenheilkunde, 1879, p. 181.
[4] Zehnder's Monatsblatt, 1882, p. 149.

[1] Achiv. f. Psychiatrie, xiii., p. 246.
[2] Ibid., p. 242.
[3] Gehirn Krankheiten, ii., p. 190.
[4] Topische Diagnostik, p. 389.
[5] Centralblatt Augenheilkunde, 1877, p. 254.
[6] Brain, 1882, p. 381.

This case proves, what we had already concluded from previous cases, that there is a visual centre in the cortex. As regards its exact localization it does not lead us beyond our former conclusions, that the visual centre is in the posterior part of the hemispheres.

I will next mention two cases in which hemianopia followed traumatic injury of the brain.

The first case was a man, aged twenty-three, wounded at the battle of Antietam. According to the account of Surgeon McCall,[1] the ball passed from about one inch above the occipital protuberance into the cavity of the cranium and emerged at a point to the left of the median line about an inch and three-quarters from the point of entry. There was temporary paralysis of right arm and leg. Keen and Thompson[2] made a careful examination eight years after the injury. Fundi oculi were normal. Central vision, and vision in left half of field were normal, while in the right of the field of vision there was complete blindness. The blind field reached to a vertical line passing through the point of fixation. Only at the latter point there appeared to be a very slight bending of the line toward the affected side.

Nieden[3] reported the following interesting case, which, at the time of his last report, in the latter part of 1883, was still under observation. A young woman of twenty-two sustained a severe injury in the occipital region from a fall. Notwithstanding the continuance of headache and slight paralytic symptoms, she attended to her ordinary household duties until about seven months after the injury, when, on account of the supervention of serious symptoms, mental disturbance, convulsions, etc, operative interference was resorted to. There was at this time slight paralysis of the right arm and leg, but vision, which had been repeatedly and carefully examined, was altogether normal. The trephine was applied, and a button of bone removed, just to the left of the sagittal suture, and one-half centimetre above the external occipital protuberance.

This, according to the calculation of Nieden, was just over the apex of the occipital lobe. During the operation the dura mater was injured and subsequently brain-substance protruded through the opening in the bone.

The second day after the operation it was noted that the paralysis and anæsthesia of the arm were diminished, but that the patient spoke of a cloud before the eyes, especially on the right side. Subsequently the patient entirely recovered from the paralysis, headache, etc., but the disturbance of vision remained permanently. As soon as a careful examination could be made it was noted that in the right eye the whole of the temporal field of vision and a part of the upper median field were missing, and that central vision was impaired. In the left eye central vision was perfect, but there was a slight concentric contraction of the field. A year subsequent to the time of injury central vision in the left eye was still perfect, but one-third of its median field was missing. This was attributed to the cicatrization of the wound in the occipital lobe causing further destructive changes in a part of that lobe which had hitherto functioned for the inner part of the left retina.

Though no post-mortem examination was made there could scarcely be better evidence of cerebral localization than this case. The impairment of vision was the immediate result of an injury of the surface of the brain, in just that locality where such a result might be expected. But, besides that, the visual disturbance followed the injury immediately, no other cerebral symptoms appeared, in fact, those previously existing began immediately to disappear, so that the visual symptoms cannot be attributed to any general injury or involvement of distant parts, but is a direct expression of local changes.

The last three cases are almost positive proof of the general conclusion above drawn, that there is a cortical centre for vision which is situated in the post part of the hemispheres. When these observations in man are compared with experimental results in animals, we may state that the visual centre is mainly in the occipital lobes.

I shall add but one case to the foregoing, which, on account of the theoretical and practical value, will be given somewhat in detail.[1] A man of forty-five suffered in March, 1881, with severe headache in the left occipital region, and observed also that he did not see objects on the right of the field of vision. A careful examination, in July, revealed a right hemianopia nearly to the median line, and normal fundi oculi. At this time there was no other cerebral symptom of local significance, but shortly afterward an awkwardness in the use of the right extremities was observed. There was also observed impairment of the cutaneous sensibility, muscular sense and muscular power of the right extremities. At first these were more marked in the leg, but they gradually increased in both arm and leg, until these functions became entirely abolished. August 1st, slight paralysis of the muscles supplied by the lower branch of the right seventh nerve was observed.

From the above symptoms and the presence of fever, emaciation, etc., a brain abscess was diagnosed, and, August 3d, the abscess was opened. The trephine was applied at a locality supposed to correspond to the posterior superior angle of the left parietal bone. About an ounce and a half of pus escaped after an incision into the brain. For some days there was improvement, diminution of paralysis, etc., but patient died August 16th.

Post-mortem examination revealed what Wernicke described as a tubercular abscess of the brain. The abscess was of the size of a large hen's egg, and occupied the left occipital and parietal lobes, occupying rather the median than external portion of the parietal lobe.

The lesion here found in itself might be of no more localizing value for the symptom hemianopia than several of those already mentioned, merely indicating that hemianopia was dependent upon disease of a hemisphere. But taken in consideration with the development of the symptoms and other facts in cerebral localization the case is more significant. There was a gradual development of the symptoms, first hemianopia and then gradual involvement of the leg, arm, and face. Now the centres for the muscles of the leg, arm, and face lie respectively more and more distant from what we have taken to be the centre for vision. So the development of the symptoms seem to demand the following explanation: the abscess began in the occipital lobe, causing only disturbance of vision, and as it extended forward it gradually involved the centres for the leg, arm, and face.

It may be permitted to add a word of admiration for the boldness of applying to practice the principles gained from scientific study. Although operative interference was without avail in this case, it may, nevertheless lead to its more successful issue in the future.

This closes the pathological material at our command for the establishment of a cerebral centre of vision in man. The cases are few in number, partly because those instances are rare where such circumscribed lesions occur, partly because careful examinations during life are usually not made, have scarcely been made at all until recent years. More than one-half of the above cases were reported within the last three years.

A proper examination for the symptoms is more important than is usually believed. Patients very frequently do not observe visual disturbances when they are only partial, or they falsely interpret them, for instance, say that they do not see with the left eye, when there is left hemianopia. Physicians also frequently overlook these symptoms, and blunders have been made by skilled specialists which were only rectified by careful periscopic examinations.

We have now done with the evidence, gained from the

[1] Medical and Surgical History of the War, Part I., vol. ii., p. 206.
[2] Trans. of the Am. Ophth. Soc., 1871, p. 122.
[3] Archiv. f. Ophthal., xxix., 3.

[1] Wernicke and Hahn (Virchow's Archiv., 1882, xxxvii., 2).

study of anatomical, physiological, and pathological data, which bears on the question of the cerebral centres of vision. We have seen that all points alike to the presence of such a centre in the cortex of the posterior portion of the hemispheres. It may be that other parts of the brain are in some manner connected with the sense of vision, for the subject is not entirely cleared up. But it must be accepted as an acquired fact in anthropological science that the sense of vision is intimately connected with a limited portion of the cerebral cortex.

A CASE OF POISONING BY PODOPHYLLUM PELTATUM.

By WALTER B. REYNOLDS, M.D.,

WASHINGTON, D.C.

The following case is presented to the profession with the belief that it is of sufficiently rare occurrence to make it of some interest to them, as well as being worthy of record.

About 1 P.M., on the 9th of June last, I was summoned to come at once to see Mrs. C——, who was said to have been taken suddenly and critically ill. On reaching the patient I found her with the following symptoms, to wit: incessant retching; scant, but very frequent bloody stools; violent colic and tenesmus; eyes sensitive to light, and pupils slightly contracted; skin and extremities cold; slight indications of respiratory paralysis; pulse rapid and weak, and other usual symptoms of collapse. She was considerably excited, but perfectly conscious, and stated that she had been feeling badly for several weeks on account of chilly sensations and the irregularity of her bowels. To remedy these troubles she had taken, the evening before, three of Dr. Jayne's liver pills, to which she attributed her illness. She denied having taken anything else, but mentioned, in reply to a question, that she had not had her sickness for six weeks. Nor had she suffered from any of the early symptoms of gestation. Brandy and fomentations were the domestic remedies that had been used.

I had her head lowered, applied external warmth, with a large sinapism over her abdomen, and gave a hot brandy punch (which was repeated every half hour) just as soon as she ceased retching, which had returned shortly after my arrival. The matter vomited consisted of bile and glairy mucus, each in a small quantity. The punch was retained, and together with the external warmth caused, in a short time, her skin to become somewhat warmer, and she expressed herself as feeling more comfortable; but she still had frequent paroxysms of great pain. To relieve this I endeavored to administer a hypodermic injection of sulphate of morphia, and also brandy, but my syringe could not be made to work. As the patient had been almost constantly vomiting and purging since 2 A.M., neither an emetic nor cathartic were considered necessary. A messenger having returned from the drug store, I placed on her tongue one powder of the following formula:

℞. Bismuth. subnit..... 6.00 grm.
Pulv. ipecac. comp..... 2.00 grm.

M. Ft. chts. no. vj.

Sig.—One every half hour until two have been taken, and then repeat hourly.

A warm starch enema was also given, and repeated after an interval of two hours. The patient was to use a bed-pan, and to be kept as quiet as possible. After remaining awhile I left, giving instructions that I should be sent for in case any change occurred, and that I would return later.

At 6 P.M. Mrs. C—— was somewhat easier. Her bowels continued to move frequently, and were still melænatic in character, but did not occasion as much pain. Her pulse was 90, a little stronger, but irregular. Retching had ceased. She considered herself stronger, but complained of difficulty in breathing, and had suppression of urine. The punch was made stronger (32 grm. instead of 16 grm. of brandy to a tumbler of milk), and ordered to be given, in the form of milk punch, a tablespoonful every fifteen or twenty minutes until the distress in breathing had improved, as I noticed it was not so great for awhile after the stimulant had been taken. The powders were continued every two hours. Warm cloths were applied over the hypogastric region, and renewed every two hours, with a wineglassful of flax-seed tea every three or four hours. Her diet to consist of milk, weak tea, and two soft boiled eggs in case she desired anything to eat.

Her husband was present at this visit, and I elicited the following facts, which confirmed my suspicion that his wife had taken an excessive dose of one of the drastic cathartics. At the suggestion of a lady neighbor she purchased the previous day two May-apples (weighing 16 grm.), one of which she steeped for an hour in half a pint of boiling water; all of which she drank warm, after straining it, on retiring at 10 P.M., the 8th. Mrs. C—— is a healthy, tall, well-developed German woman, about twenty-five years of age, and the mother of three living children.

On the morning of the 10th she was very much improved. However, she slept very little during the night, owing to continued hypercatharsis, which had occurred about every three hours since my last visit. Her pulse was 85, and stronger, but still irregular. She suffered with comparatively little pain, and while it continued to return periodically, yet the intervals were gradually being lengthened. Complained of general weakness and soreness, with a feeling throughout the digestive tract as if she "had swallowed boiling water." She had to discontinue the milk punch, as it produced retching, but took instead brandy and water at the hours ordered. The powders were continued every three hours; also flax-seed tea every two hours. Warm applications were constantly kept over the abdomen, for their soothing effect, her urine being passed in the normal quantity. The other treatment was continued, with the exception of the brandy, which was allowed only three times daily, as no difficulty of breathing was experienced.

The following morning I found that the patient had had a good night's rest, and no movement of the bowels nor pain since 5 P.M., the previous day. Said she relished her breakfast, and felt well enough to be up if she were not so sore and weak. There was no symptom of salivation at any stage of her case, as has generally occurred in experiments with this medicine, especially on the lower animals. I gave directions for her to remain quietly in bed for a few days; to take beef-tea in addition to her other diet, with one powder twice, and brandy (16 grm.) three times daily. Flax-seed tea every three or four hours.

Three days later I called, and found Mrs. C—— attending to her household duties. She had steadily improved, and I did not detect any irregularity in her pulse, though it was still weaker and faster than normal. She looked pale, and said she felt weak, but in all other respects thought herself better than she was before taking the May-apple. I cautioned her in regard to diet; stopped the powders, but continued the brandy twice daily. I ordered the following:

℞. Tinct. ferri chlor..... 24.00 c.c.
Quiniæ sulph..... 4.00 grm.
Strichniæ sulph..... 0.03 grm.
Syr. aurantii flor..... 48.00 c.c.
Aquæ.....q. s. ad. 128.00 c.c.

M. Ft. sol. Sig.—A teaspoonful in a tablespoonful of water morning and night, through a quill.

No. 1522 Connecticut Avenue.

HYSTERIA IN THE MALE.

By SPENCER M. FREE, A.M., M.D.,

PHYSICIAN TO NORTHWESTERN MINING AND EXCHANGE COMPANY.

HAVING read in several recent journals reports of hysteria in the male subject, I present my experience, hoping it may be of value in helping others to avoid the errors which I made.

My practice is in a mining town of about three thousand inhabitants (including children), and nearly all of them are under my care as the company's physician. I have hence seen many cases of this disease, but only four in the male in my own practice, and one in consultation. This makes my proportion of cases one male to about fifty female, instead of one to twenty as recorded by Briquet.

I shall relate one case *in full*, as it illustrates clearly the disease as well as the mistakes of diagnosis.

CASE I.—June 20, 1882, I was called to see L. T——, adult, single, laborer, generally in the woods or on the farm; weight, one hundred and sixty-five pounds. He had always been well. Had been suddenly attacked with diarrhœa and slight vomiting. Diagnosed, "summer diarrhœa." Treatment caused improvement for a few days, when a second attack occurred. He again improved until June 29th, when he was "taken with" headache. The pain gradually extended downward along the spine, until at the end of five days the whole vertebral column was involved. Pains were paroxysmal, and at times so severe as to be alarming. There was much tenderness on pressure. The system in general showed symptoms of disease, except the temperature, which remained below 99.2°. Treatment availed very little. Occasionally he improved for a few hours. Diagnosis now made of spinal irritation or meningitis. This state of things continued until July 6th, when he was attacked with pains in the abdomen, resembling colic. He and the family said he had high fever each afternoon, and that at these times the pains were much worse. I took occasion to see him at such times, but the thermometer showed only slight increase of temperature. When the abdominal pains developed those along the spine subsided to a great extent, though they did not disappear. I became worried. I had twice made a wrong diagnosis. While thinking over the case it flashed into my mind, "Could it be hysteria?" I traced the family history for two generations, but nothing of value was found, except that some of his mother's family were "nervous" (to use her words). On the night of July 8th I was called in haste, as he was "dying." I found him apparently with severe colic. I applied hot fomentations, gave hypodermic injections of morphia, and carefully watched for hysteric symptoms. I gave him two and one-third grains of morphia in this way and a small amount of chloroform by inhalation ere he slept. (I have noted several times the large amount of morphia that hysterical patients will tolerate without producing sleep.) I noticed that he inquired for a young lady of the house, and was restless when she was out of the room; that he would not allow me to leave the bedside; and that he manifested a few other symptoms of an hysterical nature. I learned that he had proposed marriage to this young lady and had been refused. I determined, in view of all this, to treat for hysteria, and the next morning I gave him a remedy which is a favorite with me in this feigning (sham) variety, namely, a "blowing up." I began severely by telling him that nothing was the matter, that he should be ashamed of himself, that he should get up and go to work and relieve the family of this annoyance and expense, etc.

Of course he pleaded and tried to arouse my sympathy. I gave none; he then tried abusing me and berating my knowledge, I did not become angry, but continued my severity. Finally he began to swear, he sprang up in bed, clenched his fists, and prepared to "lick" me and put me out of the house. I did not flinch but looked him steadily and firmly in the eye. Suddenly he dropped "in a heap" upon the bed, was powerless, and cried and sobbed. I had conquered. After giving a few instructions as to his management I left.

He got out of his bed in a few hours (a thing which he had not done before for nearly three weeks). In two days he went to work, and has lost no time on account of sickness up to this date. I consider this a pure, unadulterated case of hysteria, and the only discoverable cause disappointment in love.

The plan of treatment here used would not be appropriate were the physician dependent upon patronage for his practice and living, as he would not be called upon again by the patient, and possibly not by the family. The ant. et potass. tartrate would probably be as effective, and not productive of harm to the one prescribing it.

CASE II.—E. L——, adult, laborer. While intoxicated he fell into a chaldron of boiling oil. After anodynes had been dispensed with he became wakeful, and soporifics had little effect. I noticed that he fancied the thermometer, and following the suggestion I impressed him with its wonderful power. He said he could feel its influence through the entire body. In from two to three minutes after placing it in the mouth, he would be asleep and remain so for several hours. I used it in this way twice a day until his death, twelve days after the accident, from perforation of the duodenum.

CASE III.—Consultation. Adult, woodsman. He had bronchitis, but was nearly well, when he suddenly "lost his voice." This condition had lasted five days when I saw him. I told him the doctor would get him an instrument, explained its effect, etc. He returned at the appointed time still speechless. The doctor placed the thermometer under his tongue, and had the pleasure of seeing him perfectly cured by one application. The disease had not returned when I heard from him more than two years afterward.

CASES IV. and V. are miners, adults, unmarried. In Case IV. the hysteria took the form of "irritable bladder." Case V. "felt funny all over," nor could we ever obtain a better description of his ailments. Both were cured (not perfectly, but satisfactorily) with placebo treatment. These cases are interesting, chiefly as illustrating the cause. The patients both masturbated to a small extent, and will probably be permanently cured by marriage.

After carefully studying the cause in all my cases, male and female, I find that in the great majority of them it is some disturbance of the sexual system or organs. This is nearly always true in the feigned variety of cases.

DAGUS MINES, ELK COUNTY, PA.,

RECTAL ETHERIZATION.—Dr. W. H. Taylor, of New Bedford, Mass., sends us the following: "Apropos of rectal etherization, I beg leave to submit the following case: On July 30, 1884, at 10 A.M., I made an attempt to close a wound of the larynx which had been produced with suicidal intent on May 15, 1884. Anæsthesia was at first induced by ether applied on a sponge over the wound. When full insensibility occurred, ether vapor was conducted into the previously washed rectum from a bottle in a water-bath at 140° F., supplied with a rubber tube eight feet in length. About four ounces of Squibb's stronger ether were given by rectum, and all entered except a few drops which had condensed in the rubber tube. The apparatus was in charge of my friend G. De N. Hough, M.D., one of the internes of Bellevue Hospital. Notwithstanding the free entrance of the vapor, the patient manifested evidences of pain during the operation, and stated subsequently that he was conscious during a large part of the time. He sat up on the afternoon of the same day, and partook of the evening meal as usual. No trouble was experienced at any time from the ether, except the failure to induce anæsthesia."

Progress of Medical Science.

Cardiopathy of the Menopause.—Under this title Dr. E. Clément writes, in the *Lyon Médical* of August 3 and 10, 1884, concerning a peculiar functional disorder of which he has had occasion to observe several examples. The patients presented all the symptoms of a profound disturbance of the cardiac functions without any physicial signs of valvular lesion. The age at which the first symptoms appeared was from forty-six to fifty years. The patients presented nothing striking in their personal or hereditary history. They were all well built, healthy women, accustomed to manual or household labor, but never exposed to excessive fatigue such as might occasion cardiac hypertrophy. Some had borne children, others had never been pregnant. There was no hysterical element in the cases, nor had any of them suffered from rheumatism. The first symptoms appeared before the menses had ceased entirely, but when they had become irregular either in their time of recurrence or in the amount of the flow. The onset was gradual. During an indeterminate period, for perhaps two or three months, the women suffered from an indefinite feeling of malaise, their strength diminished and they were less able to resist fatigue, and finally they began to suffer from palpitation. The evolution of the disease, while progressive, is yet interrupted by intervals, more or less extended, of apparent health, but each recurring attack is more severe than the preceding one. The palpitations are soon followed by dyspnœa on exertion, although there is not the slightest difficulty of breathing when at rest. Sleep, however, is often broken by distress in the region of the heart. After a time all these symptoms become very marked upon the slightest movement, and are only alleviated somewhat when the patient sits perfectly still in the chair. Another phenomenon is a feeling of faintness, which goes on sometimes to actual syncope. The examination of the heart gives a negative result. The cardiac impulse is a little exaggerated, the rhythm may be irregular, but the valvular sounds are distinct and without the faintest murmur, the first sound being somewhat the weaker. There is, however, an extreme rapidity of the heart's action, the pulse-rate being often 150 to 160 to the minute. At first there is no œdema, but after three or four attacks there may be a slight swelling about the malleoli or in the integument over the hypogastric region. Whatever may be the intensity of the cardiac symptoms, there are no bronchial nor pulmonary disturbances. The dyspnœa is entirely of cardiac origin. There is never any venous stasis, but there is an evident spasm of the arterioles. There is a remarkable pallor of the face, which is due, the author believes, to this vascular spasm rather than to anæmia. The urine is in general abundant enough, except at the height of an attack, when its excretion may be nearly suppressed; it never contains any albumen. The course of the affection is peculiar, occurring as it does in paroxysms separated by intervals of varying duration. As the disease advances the intervals of remission grow shorter. The attacks last usually about a week, but might be of longer duration were it not for medical intervention. The affection continues for an indefinite period, but the prognosis is favorable despite the apparently grave symptoms of dyspnœa, œdema, weakness, etc. The disease subsides as it began, the intervals of health growing longer and the paroxysms shorter and of less intensity. The cause, the author thinks, is to be found in a modification of innervation by the great sympathetic, and especially in excitation of the cardiac nerves. The treatment is by means of large doses of infusion of digitalis, beginning with an infusion of eight grains of the powdered leaves, and reducing gradually to five grains. Sometimes the patients acquire a disgust for this drug, and then Dr. Clément substitutes the alcoholic extract of convallaria maialis in the dose of fifteen to twenty grains. But the results are much less satisfactory than when digitalis is employed. The paroxysms of dyspnœa are best relieved by the preparations of opium, more especially morphine. At the same time, of course, the patients should remain as quiet as possible and avoid anything that may cause mental or physical disturbance.

Malarial Orchitis.—Dr. Angelo Zacco relates in the *Gazetta degli Ospitali*, Nos. 16 and 18, 1884, the case of a man who applied for relief on account of orchitis. The right testicle was swollen to three times its normal size and was painful to the touch. There was also a slight amount of epididymitis. The patient had received no injury and had never had syphilis, gonorrhœa, nor mumps. All the ordinary remedies were tried without effect, and as the patient was suffering from a mild form of intermittent fever he was given quinine. Under this treatment the swelling of the testicle rapidly subsided. The author believed that the orchitis was caused by direct action of the malarial microbe carried to the testicle in the blood stream.

Treatment of Sciatica by Congelation.—Acting upon the theory that blisters and other revulsive measures exert their therapeutic effects in sciatica through the nerve terminations, M. Debore thought to act upon a greater extent of surface and obtain a correspondingly greater benefit by congealing the integument. This he did in a number of cases by a spray of chloride of methyl, and says that the effect was marvellous. The relief to the pain was instantaneous, though there were sometimes slight relapses, which yielded at once, however, to a repetition of the congelation. The spray was directed wherever the patient experienced any pain, sometimes over quite an extensive surface. The skin was blanched temporarily and occasionally vesication was produced, but no other accidents occurred. The patients were all men and free from any suspicion of hysteria.—*Revue Médicale*, August 16, 1884.

Myasis.—Under this title Dr. Posada-Arango describes, in the *Journal de Médecine de Paris* of August 16, 1884, an affection caused by the deposition of flies' eggs in the nasal fossæ. He relates a case occurring in a farmer's boy fifteen years of age. The patient was annoyed one morning by a fly getting into his nostril, but it soon emerged and no more was thought of it. Forty-eight hours later he began to have pain in the nose, accompanied by a slight bloody discharge, and soon he noticed a worm coming from the nostril. He complained of severe headache and a noise within the head like the rumbling of carts over a stony road. Dr. Arango removed as many of the worms as he could by means of a curette, and then injected a decoction of an aromatic plant called *cordoncillo* (a sort of pepper plant), and blew tobacco fumes into the nostril. By means of these applications, frequently repeated, the nostrils were finally cleared of about one hundred and twenty worms. Of the fourteen cases of this affection hitherto reported, nine ended fatally. The fly which deposits the eggs is a little larger than the ordinary house-fly, and is of a general bluish color, though presenting a green or violet metallic hue when seen in certain lights. The worms are white, pointed at the buccal and truncated at the caudal extremity.

Acute Mania at the Menstrual Period.—Dr. Cabadé relates the case of a woman who, while menstruating, lost her husband under very terrifying circumstances. Menstruation ceased at once and did not return for eight months, during which time the patient was exceedingly nervous and suffered from slight convulsive attacks. Later she had acute maniacal attacks at each menstrual period, being perfectly sane in the intervals. The mania recurred at each monthly period, and was only controlled by large continued doses of bromide of potassium.—*Wiener Medizinische Wochenschrift*, November 29, 1884.

THE MEDICAL RECORD:

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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MEDICAL MANNERS—ANCIENT AND MODERN.

A WRITER in an English exchange laments the decadence of polite learning and punctilious manners among the medical men of to-day. Once they were very proficient classical scholars. Now, alas, a little dog Latin, *quantum sufficit* for prescription writing, is all that most of our modern luminaries possess. "Then," he continues, "if you meet some of our very old practitioners and contrast their manners with the shining lights of to day the difference will be perceived. The gracious demeanor, the courtly address, the punctilious observance of courtesy, the accuracy of phraseology, the general tone expressed in the word gentleman, are remarkable *for their absence* in the leading medical men of to-day. Brusqueness, dogmatism, self-sufficiency, brevity have taken their place. Science is accountable for this. Only half education could produce such men. Science contracts—limits the range of reading. It confines the imagination by which the soul grows. The old classical education enlarged the bounds of reading and of interest. In the old classical writers we find the almost perfection of language, and I might even say of morality."

It may be admitted that there is some truth in the criticism thus quoted. Nevertheless we are quite sure that so far as the "minor morals and manners" are concerned, a comparison of those of to-day with those of the last century will show a vast advantage to the former. In all ages there have been charges that virtue was declining. Said some one to Dr. Akenside: "Doctor, after all you have said, my opinion of the profession is this: The ancients endeavored to make it a science, and failed; the moderns, to make it a trade, and succeeded." This was in 1759, and at the present day we hear the same melancholy accusation.

It may be admitted that a hundred years ago there was more ceremonious politeness and a greater stress laid upon conventional forms in social and professional intercourse. But he who reads the history of those days will be convinced that beneath the polished exterior there was far more dislike, envy, and bad feeling than exist to-day.

John Hunter died from a quarrel with his hospital colleagues. In the eighteenth century all medical Europe rang with the quarrels between Cullen and Brown and their respective adherents. In the time of Garth a furious war raged between the supporters and opposers of the dispensary system. That was the age of scribblers, and prominent physicians were constantly being lampooned by their less known enemies.

Says Dr. Wynter to Dr. Cheyne:

> "Eat grass, reduce thyself and die,
> Thy patients then may live."

And some punctilious friend wrote of Sir Richard Blackmore, schoolmaster and physician:

> "In vain his drugs, as well as birch he tried,
> His boys grew blockheads, and his patients died."

Dr. Armstrong, author of the "Art of Health," confessed that he never attained a large practice because "I could not tell a heap of lies in my own praise, nor intrigue with nurses, nor associate, much less assimilate, with the various kinds of pert, insipid, lively, stupid, well-bred, impertinent, good-humored, malicious, obliging, deceitful, drivelling gossips; nor enter into *juntos* with people I did not like."

A great part of the courtly, not to say obsequious, manners of the last-century physician was assumed as a feature in his business.

"If you would be esteemed very wise, sober, and grave," writes Mead to a young physician, "you should then learn most obsequiously to fawn and soothe man, woman, and child, since few else will thrive well."

It would be quite easy to cite many more illustrations in evidence that there is now more mutual good feeling and kindness, and less coarseness and vulgarity among physicians than there ever has been. The tendency to excessive specialism, at the expense of general knowledge and culture, must be admitted, and scientific study does not tend *emollire mores*.

It would be an interesting task to trace this gradual decline of learning, in its broadest sense, among eminent physicians of the past. Of the Elizabethan physicians Lord Bacon says: "For you shall have of them antiquaries, poets, statesmen, humorists, merchants, divines"—everything in fact except skilful practitioners.

Later Sir William Temple paid a similar tribute to the Faculty, which Dr. Johnson still later accepts with some hesitation, "Whether what Temple says be true, that physicians have had more learning than the other faculties I will not stay to inquire; but I believe every man has found in physicians great liberality and dignity of sentiment, very prompt effusion of benevolence, and willingness to exert a lucrative art where there is no hope of lucre."

Of the modern physician it cannot be said that he is a man of wide learning. He seeks rather to accumulate scientific knowledge and technical skill. Whether a reaction toward a more general culture, at least as a basis for his education, might not be a greater help in the practice of his art, is a burning question just now.

THE IMPORTANCE OF HOLIDAY SEASONS FOR PHYSICIANS.

WHEN Addison tells us in the "Spectator" that "the preservation of life should be only a secondary concern, and the direction of it the principal,"[1] he says what is very true, for a well-directed life insures a healthful life. While, therefore, the higher aim is to be approved, and undue

[1] Spectator, No. 25.

solicitude about the health should be condemned, it is understood that when to every man in the performance of his daily duties work becomes irksome and painful, respite is imperatively demanded, he cannot longer persist in his tasks without physical detriment.

It cannot be too much kept in mind that labor is physiological only when it is agreeable, and that every hour spent in goading a tired organism to toil, may have a pathological outcome. When study is attended with that sense of *bien être* which indicates that the brain is abreast of its tasks, then and only then is it profitable; all experience will attest this. When the physician can go through his regular routine of daily calls with interest, even with zest, and a flow of spirits, he is working to advantage; when interest flags and the spirits droop, and there is organic discomfort, it is time for him to have a season of rest; all this is so plain as to need only to be stated.

Now that the holiday season is well-nigh over, and business men are returning to their offices and clergymen to their pulpits, it is well that that model of perseverance and devotion to a good calling, the city physician, who has been sweltering at home during the hot season, should ask himself whether he can afford not to take suitable holiday enjoyments?

The question hardly deserves discussion, for every medical man will be ready to give the proper answer in its application to everybody but himself. He knows that it is a law of nature that physicians, as well as other men, should have periodical seasons of rest, relaxation, and recreation. He is ready to urge upon his patients the importance of their availing themselves of the hygienic benefits of frequent change of scene. He tells the active man of business, the public officer, the banker, the merchant whose liver and whose kidneys are becoming sluggish, whose brain will not work well, to get out of the old ruts, and he orders the dyspeptic clergyman from his pulpit to the prairies, the forest, or ocean. As for himself, however, while others go to the seaside he stays at home; the peculiar nature of his profession forbids that he should absent himself from his office longer than a day or two. The clergyman's salary goes on as usual while he is away, and the manufacturer may direct his business by telegraph or by letter, but the physician sees the perspective of his vacation pleasures marred by a dark background of lost fees and estranged patrons; in short, pecuniarily he cannot afford the recreation he needs. We are speaking, of course, of the great body of struggling practitioners, who have every interest in keeping what practice they have and in adding thereto—not of those fortunate ones who were born with silver spoons in their mouths. There is, moreover, an important distinction to be made in this respect between city and country practitioners. The city physician is subjected to causes of ill-health from which his country *confrère* is comparatively exempt. The latter habitually breathes purer air; has invigorating rides over hill and plain where nature in her grandeur and loveliness breaks in on the monotony of his toil; if he has but a few patients, these scattered over a wide area occupy the larger part of his time, giving him his fees and mileage; he has some gardening, and perhaps some farming, which distract his mind from the cares of his profession, if they do not add much to his income; his taxes are less than those of his city brother, and it costs him in every way less to live. He has fewer eager competitors, and has far less reason for harassing anxiety than his metropolitan friend. If the latter has social and æsthetic and professional advantages of a higher order, and more leisure for study and research, his manner of life is more sedentary and consequently less invigorating, and he labors under the disadvantage of not being able to live easily on a thousand a year; he has a multiplicity of cares and wants that are peculiar to his condition; he feels constantly the pressure of fierce competition, and unless possessed of rare equipoise of temper and a philosophic mind he will be given to worry, and this, whether his practice be considerable, or whether it be little. Statistics have shown that out of equal numbers of city and country practitioners the balance of longevity is in favor of the latter, who seem, as we have indicated, to be especially favored in the benevolent economy of nature. It is apparent then, that regular holiday seasons must be of great hygenic benefit to every hard-worked medical man, and especially to the harassed practitioner of the town, to whom it is, indeed, a physiological necessity.

Some time since we had a brief conversation with a medical gentleman of repute in a neighboring city, who acknowledged that he had not for ten years had a vacation of even one week! The experiment, he affirmed, would have been too perilous! He felt that he must be at his post day and night. He had a large family to support, and he had no practice to lose. He never needed money more, and cessation from work would be ruin! On questioning this individual we ascertained that life was to him a constant worry, and work was pain. Appetite and digestion were failing, and he no longer slept well. He had become "disgusted with his practice and with his patients," and it was with difficulty "that he could treat them with any sympathy and patience." "I hate those old cases, and those old faces," he said, "collecting has become irksome, and the sight of an unpaid bill makes me desperate." Some vehement expostulation on our part, and urging of our friend to break away from his work at whatever risk and cost financially, was certainly of no avail; and we have within a few days seen in a local paper the notice of his death, "from mental alienation and softening of the brain."

We do not doubt that there are many in the profession to-day who are the subjects of experiences similar to those above depicted, and who have the same appeals from the depths of the unconscious life; appeals and warnings which cannot safely be disregarded. It will not do to trifle with these imperious feelings of the organic nature, indicative of discomfort, maladjustment, and uncompensated waste in the highest centres of innervation. The part of true economy, as well as the part of duty, is always to seek suitable relaxation and rest.

THE PROGRESS OF THE COLLECTIVE INVESTIGATION MOVEMENT.

As the result of considerable previous work on the part of Gull, Paget, Clark, Lister, and other English physicians, an International Committee on Collective Investigation was organized at the meeting of the Medical Congress in Copenhagen. This Committee, after two meetings, arranged for the nomination of the following Working

Committee at the close of Sir William Gull's address: For England, Gull, Humphry, and Mahomed; for India, Fayrer; for Denmark, Trier and Lange; for Scandinavia, Bull; for Russia, Rauchfuss; for Switzerland, Despine; for Germany, Ewald and Bernhardt; for Austria, Schnitzler and Pribram; for France, Bouchard and Lépine; for the United States of America, Jacobi and Davies; for South America, Gutierrez Ponce. Professor Koranyi was subsequently added as representative of the kingdom of Hungary.

The above Committee immediately met and organized. Its first work was to appoint an Executive or Sub-Committee, which was done in the following resolutions:

1. That the Secretary be instructed to prepare a statement as to the objects of the Committee, for translation and publication in the journals of the various countries represented.

2. That a Sub-Committee be appointed.

3. That for the present it consist of not more than three members.

4. That the three members be Professor Humphry, Dr. Mahomed, and Dr. Isambard Owen.

5. That the Sub-Committee be directed in the first instance to prepare a list of subjects suitable for investigation by the Committee, and to submit the list to the members of the Committee for choice; further, upon such choice being made, to prepare memoranda and questions upon the subjects chosen, and submit them to the members of the Committee in like manner; and that, upon the acceptance of the memoranda and questions by the members of the Committee, the representatives of each nation be left to obtain the information required, independently, in such manner as they may prefer.

6. That each member of the Committee be requested, on returning home, to write his views on the subject of the proposed investigation to the Sub-Committee, who will communicate again with the members.

Thus the work stands for the present.

It is getting to be more and more felt by the medical world that collective investigation is to be a powerful agent in medical progress. But it is still more surely seen that it is an agent which has to be managed very carefully. There are only certain lines of medical inquiry along which it will as yet serve any good purpose. And eventually it will be found that to get trustworthy results collective investigation must be confined to professional men of known character and capacity, in other words, collective investigation must be limited to experts.

FURTHER CONTRIBUTIONS TO THE CHOLERA GERM QUESTION.

Dr. H. Van Dyke Carter, of Bombay, in *The Lancet* for September 6th, describes the results of his investigations of cholera stools. He has discovered an organism which he figures, and which certainly resembles very much the comma-bacillus of Koch. As Dr. Carter represents it, however, it is longer and has more of the spiral curves, being unmistakably, if the drawings are correct, a spirillum. This organism was not found in every case of cholera examined, while it was found, though rarely, in the stools in dysenteric and diarrhœal cases. Its real character was not tested by cultivation, however, so that Dr. Carter's observations have in themselves but little value.

From Marseilles come reports of a different nature regarding the cholera organism. Drs. S. Maurin and Lange, who have been working in that city since the departure of Koch, announce that they have found a *mucor* which they believe to be the actual agent in the propagation of cholera. This mucor is really only the mature form of the comma-bacillus, out of which it develops.

It appears, according to an account given in the *British Medical Journal*, on the fourth or fifth day, on the putrefying stools of cholera, and on these only. It has the form of a mycelium, the tapering ends of which are surmounted by cup-shaped sporangia, which burst on the slightest agitation, discharging vast numbers of spores. These spores require, for their germination, to be deposited on, or to come into contact with, some putrid organic matter, when they develop into a mucor of another form, an anaërobium, which they believe to be the immediate cause of the phenomena of the disease, and which again, in its turn sporifying, gives birth to the bacilli of Koch.

The bacilli in themselves are innocuous, but, deposited on a putrid medium, and in contact with the air, they develop the first-mentioned mucor, and the cycle is renewed.

The first mucor, unlike the bacillus, possesses in a high degree the power of resisting the action of so-called disinfectants; it is not killed by ten-per-cent. solutions of nitric or of hydrochloric acid; it vegetates freely in a solution of carbolic acid in like proportions, and can sustain any temperature up to 150° Cent. (302° Fahr.), but above this it breaks up, as it does also in a ten-per-cent. solution of tincture of iodine; and a specimen mounted in oil of turpentine went through its whole development up to the discharge of its spores.

The *British Medical Journal* is inclined to give some credence to the above-described account. It appears to us, however, to be beyond the bounds of probability that the cholera bacillus should have any such life-history as the Marseilles investigators assert. Dr. Koch cultivated it in gelatine, in broths, and on potato, yet never found any such mucor as MM. Maurin and Lange describe.

EXAMINATION FOR ALBUMINOSE OR PEPTONE IN THE URINE.

In 1872 Tanret proposed, as a reagent for the quantitative determination of the albumen, the acetic solution of the iodide of mercury and potash, of which the formula is iodide of potassium, 3.32 grms.; bichloride of mercury, 1.35 grm.; acetic acid, 20 c.c.; and distilled water, 64 c.c. As an agent for the precipitation of albumen, says Mehn, this reagent is valuable; it does not precipitate urea or mineral salts; it is very sensitive and much superior to nitric acid, needs no heat and keeps well.

Three years ago Mehn discovered that this solution precipitates the proteid material known as albuminose or peptone. In examining a very limpid acid urine, shaken until quite frothy, he has found that after separating the albumen coagulable by heat, a certain degree

of agitation still caused considerable frothiness. The urine contained neither pus, sugar, nor blood, yet the solution caused, in this urine deprived of albumen, an abundant precipitate, which water acidulated with acetic acid and alcohol did not dissolve. Furthermore, he has several times examined urines which contained no albumen, but only albuminose or peptone coagulable by this reagent, and also a mixture of coagulable and non-coagulable albumen. In some specimens of urine he has found coagulable albumen; this being removed the urine was still feebly clouded by nitric acid. This second cloud being removed, he obtained an abundant precipitate, due to peptone, by the acetic solution of the iodide of mercury and potassium.

Various attempts have been made to extract the whole of the coagulable or non-coagulable albuminous material with five volumes of alcohol, after acidulating with acetic acid, and also to obtain the albuminose of a liquid deprived by heat and filtration of coagulable albumen. It has been found that the results are of no value, since the peptone is not altogether insoluble in the alcohol. The addition of ether to the filtrate still gives an albuminous precipitate. Nor have any very satisfactory results been obtained by employing neutral solvents, such as absolute alcohol and sulphide of carbon. The solution under consideration seems to give the best results. Specimens of urine containing peptone seem to be rare, although some observers seem to think that the cloudiness caused by the mercury reagent in boiled urine is entirely due to that body.

At present we do not possess any means of isolating albuminose or peptone, other than those which combine with the materials from which it seems impossible to separate it without altering it; and the rules which apply to ordinary or artificial peptones do not apply to urine peptones, and cannot until the identity of the two has been demonstrated, which has not as yet been done. While it is theoretically admitted that all albuminous materials subjected to the action of pepsin, at a sufficiently elevated temperature, finally gave a peptone whose centesimal composition is constant, it is not the less true that under the name peptones are embraced products distinguished by their different reactions with the same reagents. Peptones obtained by the action of pepsin are precipitated by the iodide of mercury and potassium solution, whilst those obtained by the action of pancreatine are not.

This solution is also quite sensitive to the presence of semen in urine, giving a precipitate which is more or less abundant. While, therefore, a valuable reagent for the detection of peptone, it should be used with great care, as errors may result from the formation of other precipitates.

PUERPERAL EPILEPSY.

The older writers, says M. Ch. Féré, believed eclampsia, whether infantile or puerperal, to be a neurosis analogous to epilepsy or hysteria. But since it has been discovered that in scarlatina and pregnancy there is often albuminuria, it has been the custom to explain all cases of eclampsia in these conditions by the action of the poisoned blood upon the nerve-centres. M. Féré has brought forward in the *Archives de Neurologie* of July, 1884, some observations and reasons in support of the view that puerperal eclampsia, for example, is the expression of a neuropathic state in which the conditions in pregnancy are only the exciting cause. Puerperal eclampsia, he thinks, may be regarded as an acute epilepsy or an "eclamptic epilepsy."

If the antecedents be carefully inquired into, in cases of puerperal eclampsia, there will generally be found, says Féré, a hereditary or acquired neuropathic history. A number of cases are cited also in which the puerperal eclampsia, so-called, was only the beginning of a chronic idiopathic epilepsy.

The influence of pregnancy upon the course of epilepsy has been investigated by several observers with somewhat contradictory results. On the whole, however, it appears that during pregnancy the number of epileptic attacks is diminished. It is also well known that epileptics, and "neuropathics" generally, often pass through pregnancy and even scarlatina without any convulsion. In explanation of these facts, however, Féré puts forward the view that in those disposed to epileptic attacks there exist various epileptogenic zones, *e.g.*, gastric, uterine, peripheral, etc. In some cases the irritation must be gastric or peripheric, in other cases uterine, in order to excite the paroxysm and call forth the disease. It is known that in puerperal eclampsia, albuminuria does not always exist. Thus Charpentier alone cites one hundred and forty-one cases of this kind ("Traité pratique des accouchements," 1883). And Nothnagel admits that puerperal eclampsia is sometimes the result of an irritation of the uterine or sacral nerves acting upon an unstable nervous system.

Finally, many persons suffer from albuminuria and some degree of uræmia without having convulsions.

M. Féré has made out a case, therefore, which deserves some attention. Physicians should not be too ready to ascribe puerperal eclampsia entirely to blood-poisoning. They ought to be especially watchful when patients who are pregnant have a well-marked neuropathic history. At the same time, practical experience shows that the large majority of nervous and hysterical women go through pregnancy safely, showing that the pregnant uterus does not often become an epileptogenic zone.

INFANT FEEDING.

Upon nothing does there seem just now to be more disagreement than the subject of infant diet. The points in dispute are: the mode of diluting cows' milk and the best diluent; the use of mixed milk or of the milk from a single cow; the value of condensed milk; the value of infant foods; the question of a wet-nurse or artificial feeding. These points are by no means satisfactorily settled. One evidence of this is seen in the letters which appear in the present issue of The Record. We observe, also, in a current issue of *The Lancet and Clinic*, a carefully written article by Dr. C. W. Earle, in which he says, among other things, that "condensed milk seems to agree with a considerable number of children, but in many cases a sufficient quantity is not given to nourish a child. Used in sufficient quantities, and diluted with rice- or barley-water, it is without doubt one of the best of artificial foods." On the other hand, the

editor of *The Kansas City Medical Record*, in an excellent article upon the subject of infant diet, states that condensed milk has always proved hurtful in his hands. Some contributions from our readers to this subject of infant feeding would be timely. Writers should, however, be careful not to go over old ground more than possible.

PATIENTS FROM THE COUNTRY OBTAINING ADVICE FREE IN THE CITY.

THE thrice-told tale, yet always of painful interest to the struggling rural practitioner, concerning the abuse of medical charity, comes to us from Connecticut in a communication from Dr. Donaldson to the Medical Society of the County of New York. We are glad to refer to the practice, that we may condemn it.

It appears useless to say that rich patients from the country have no right to gratuitous services. They come, nevertheless, and the college clinics and hospital wards welcome them with an eager cordiality not to be mistaken. It is safe to say that it is impossible to find out the pecuniary liability of every stranger, but, with a little care on the part of clinical lecturers and hospital men, the evil can be very much lessened. It is perfectly competent for such gentlemen to refuse to prescribe for any but the really needy; but, we regret to say, the thirst for clinical material overcomes many other considerations, and we oftentimes find ourselves preaching in vain, and are as far from a remedy as ever.

News of the Week.

THE MANAGEMENT OF THE NEW YORK POLYCLINIC, have during the past summer made some improvements which have added greatly to the capacity of the school and the comfort of the physicians who study there. The library, waiting- and reading-rooms have been enlarged and newly and neatly furnished. The clinic-room for diseases of the throat, nose, eye, and ear has been made twice the former size, and has now thirty-one stalls and Mackenzie condensers, which as many students can employ at once. On the second floor are three large, well-lighted and ventilated lecture- and clinic-rooms, capable of seating in all three hundred persons, a laboratory with twenty stands, two waiting-rooms for patients, and a private examining-room. The school has been furnished with stationary and portable batteries, electric bells and clocks, which are sounded at the hours. In one amphitheatre the clinics in gynecology, surgery, and skin diseases are held. The second lecture-room is devoted to clinics in diseases of children, diseases of the mind and nervous system, and orthopedic surgery. A third room is used for diseases of the chest, physical diagnosis, general medicine, and practice in surgical dressings, bandaging, etc. During last session, as shown by the catalogue, one hundred and eighty-two practitioners studied at the Polyclinic. The purchase of the large property heretofore in part occupied by the Polyclinic, means that the management believe in the future of this institution. During the coming year the following clinics will be given weekly: gynecology, surgery, diseases of children, diseases of the skin, diseases of the mind and nervous system, eye, throat, nose, and ear, clinical chemistry, obstetrics, chest, diagnosis, and medicine.

MR. LAWSON TAIT, who has been on a brief visit to this country, sailed for his home on Saturday last. On the Friday evening preceding he and Mrs. Tait were entertained at a dinner given in their honor by Dr. and Mrs. Fordyce Barker. Among the other guests present were Dr. and Mrs. T. A. Emmet, Drs. T. G. Thomas, Isaac E. Taylor, W. T. Lusk, W. M. Polk, A. A. Smith, and George F. Shrady. It is needless to say that the occasion was an enjoyable one to all concerned.

RAMSEY COUNTY MEDICAL SOCIETY AND THE DEATH OF DR. STEWART.—At a special meeting of the Ramsey County (Minnesota) Medical Society, held at Dr. Stone's office, the following resolutions were unanimously adopted:

Whereas, In the sad and sudden death of Dr. J. H. Stewart this Society recognizes its loss of an esteemed and respected member;

Resolved, That we, his former associates, desire to record our sorrow and testify our warm appreciation of his professional and manly qualities. He was learned and more than ordinarily skilful in the practice of his profession, endearing his patients to himself by a most happy faculty. By his death we have lost a professional associate, conscientious and considerate, whose wise and superior counsel we shall deeply miss.

Resolved, That we deplore the loss to the community of which he was so eminent and respected a member, and whose trusts so frequently confided to him were so conscientiously and honorably guarded.

Resolved, That we tender to his greatly bereaved family our deepest sympathy.

Resolved, That a copy of these resolutions be forwarded to the family, and that they be printed in the daily papers, the *Northwestern Lancet*, and the New York MEDICAL RECORD.

AN OFFICE FRAUD AND CONFIDENCE MAN ABROAD.—A young, short, thick-set mulatto (a graduate of the College of Physicians and Surgeons, New York) is going about town obtaining money from physicians and others on one of many pretexts which appeal to one's sympathy. Numbers have been victimized by the scamp. We learn that the fellow has been carrying on this peculiar business for some years, and that he has served a term in Sing Sing Prison for forging the name of the Rev. Dr. Deems, of this city, on a check.

A COMPLIMENTARY DINNER was tendered to Dr. J. V. Shoemaker, of Philadelphia, by his friends, on his return from Europe, at the St. George Hotel, on Saturday evening, September 20, 1884.

AMERICAN GYNECOLOGICAL SOCIETY.—The Ninth Annual Meeting of this Society will be held at the Palmer House, Chicago, Tuesday, Wednesday, and Thursday, September 30 and October 1 and 2, 1884.

ASSISTANT PHYSICIANS WANTED IN THE HUDSON RIVER STATE HOSPITAL.—To fill a vacancy in the office of First Assistant Physician at the Hudson River State Hospital, and for the appointment of a Third Assistant Physician and Sanitarian at the said hospital, open competitive examinations of applicants for the ap-

pointments will be held under the rules of the New York Civil Service Commission. Candidates for the positions will be examined in general medicine and surgery; in psychiatric medicine; in the anatomy, physiology, and pathology of the brain and nervous system; in the use of the microscope and instruments of precision; in sanitary science and hygiene; in foreign languages; and also in regard to special qualifications for the respective appointments.

It is required that candidates be graduates of a reputable medical college, and have completed the term of service required by a regular appointment in the resident medical staff of a general hospital, and that they be familiar with the practice of home and foreign institutions for the insane.

There are no restrictions imposed as to the residence or citizenship of candidates.

The examinations will be held at such times and places as the Civil Service Commission may designate. Ten days' notice of each examination will be mailed to all eligible applicants of record, and will be published in the State paper, and in one other journal published in Albany.

Applicants will be admitted to examination upon the production of the official notification to appear for that purpose.

The First Assistant Physician will receive $3,000 salary per annum and his board; the Third Assistant Physician will receive $1,000 salary per annum and his board.

Printed application papers for admission to the competitive examinations will be mailed to candidates on application to Dr. Joseph M. Cleaveland, Superintendent Hudson River State Hospital, Poughkeepsie, Dutchess County, N. Y. Applications must be forwarded on or before October 1, 1884.

Mississippi Medical Society.—The Tenth Annual Meeting of the Mississippi Valley Medical Society ("The Tri-State Medical Society") will be held at Springfield, Ill., September 23–26, 1884.

American Public Health Association.—The opening session of the Twelfth Annual Meeting of the American Public Health Association will be held on Tuesday, October 14th, in the main hall of the Liederkranz Building, St. Louis.

The National Conference of the State Boards of Health, postponed from August 7th, at Washington, will also be held here during the same week.

Open to Universal Competition.—The Cartwright prize of the Alumni Association of the College of Physicians and Surgeons of New York is open to the competition of the alumni of *any* medical college.

It consists of a prize of $500, to be awarded to the best medical essay submitted upon any subject the writer may select. The award will be paid as soon as the successful article shall have appeared in print.

If no one of the competing essays be deemed sufficiently meritorious the prize will not be awarded. An essay in order to be held worthy of the prize must contain results of original investigation made by the writer. An award of this prize will be made at the commencement of 1885. Essays must be sent to a member of the Prize Committee before April 1, 1885. Competing essays must each be marked with a device or motto and accompanied by a sealed envelope similarly marked containing the name and address of the author.

R. W. Amidon, M.D., 18 W. Twenty-first Street, Chairman; Robert Abbe, M.D., 32 E. Twenty-fifth Street; Walter Mendelson, M.D., 209 W. Forty-sixth Street, Committee on Prize Essay.

Victor Hugo and the Ambulance Service.—The establishment of an ambulance service like that in New York is very nearly an accomplished fact in Paris. Dr. Henri Nachtel has published a pamphlet upon the subject. It is prefaced by the following characteristic letter from Victor Hugo:

31 Juillet, 1884.

New York has begun, Paris will continue. That which you advise, Monsieur, is sustained by reason and by evidence. Success will confirm your confidence. The plan is clear, it is appropriate, it is humane. I commend you and I congratulate you. Victor Hugo.

The Singular Persistence with which the *Midland Medical Miscellany* continues to appropriate editorials and other matter from The Medical Record without acknowledgment interests us very much. It is furnishing us an exciting psycho-journalistic study. It is, we think, an exquisite case of moral *Schwächezustand*, or perhaps of imperative conceptions (combined with prehensions), there being in its midland mind no solution in the general continuity of the *meum* and *tuum*.

An Anthropological Congress was held recently in Breslau. Among the interesting contributions made at that time was one by Professor Schaffhausen, of Bonn, who has found, as the result of a series of cranial measurements, that the antero-posterior or longitudinal growth of the skull ceases before the lateral growth, and that the longitudinal growth bears a distinct relation to that of the body, while the lateral growth stands in relation to the intelligence. Here is then a physical basis for the schoolmaster to work upon in assigning his tasks and making his prophecies.

Prizes for Essays on the Prevention of Blindness.—At the Hygienic Congress held at the Hague, August 27th, a prize of 2,000 francs was awarded to Dr. Fuchs, of Lüttich, for an essay on the "Causes and Prevention of Blindness." The prize of 1,000 francs offered for an essay on a similar subject was awarded to a German author, whose name, strange to say, could not be discovered.

Works of the Late Dr. Farr.—A movement is on foot to collect and publish the statistical papers of the late Dr. Farr. The editor will be Mr. Noel Humphreys.

The Hygienic Congress at the Hague has unanimously adopted the propositions of Professor Proust expressing the desirability of the meeting of a new International Sanitary Conference and the creation of a permanent international scientific committee to act against epidemics. It has also passed a resolution in favor of an international sanitary code. Holland will be asked to be the interpreter of the views of the Congress to the other Governments. In the Second Section, on the 27th ult., a long debate took place upon cremation. In the general meeting of the Congress, Mr. Corfield, of London, defended the axiom that science is the enemy of

disease. M. Trelat, of Paris, spoke upon the temperature which should be maintained in dwelling-houses. Mrs. Bovell-Sturge, of London, condemned the system by which at present the State provides for the education of children who have been abandoned by their parents, and advocated their being educated in private houses.

A New Hospital at Rome.—The Pope has given $200,000 for the erection of a new hospital at Rome near the Vatican.

More Yellow-Fever Cases in New York and Brooklyn.—Two sailors died of yellow fever at the Long Island College Hospital last week. They came from the West Indies on the British steamer African, and landed at Perth Amboy, N. J.

A steerage passenger on the Newport, from Havana, which arrived at this port recently, was found at a hotel on West Fourteenth Street apparently suffering from yellow fever. He was at once put in quarantine.

At this time of year there is no possible danger of yellow fever extending through the city.

The Sanitary Council of Maryland held a successful meeting at the Blue Mountain House, September 17th, 18th, and 19th. Among the subjects discussed were: "The Adulterations of Food and Medicines;" "The Pollution of the Water-courses in Maryland;" "The Relation of the Diseases of Animals to the Human Race;" "The Sanitary Problems of the Cities and Towns of Maryland;" "The Relation of the Press to Sanitary Work;" "The Relation of Teachers to Sanitary Work;" "The Physical Dangers of Alcoholic Beverages;" "The Relation of the Clergy to Sanitary Work;" "The Duty of State and Municipal Governments in Connection with the Public Health;" "The Disposal of the Dead."

A Reception to Dr. Playfair, of London, was tendered by Dr. T. Addis Emmet at his residence in this city, on September 26th.

Medicine at Winnipeg, Manitoba.—A correspondent of the *Canadian Practitioner* writes: "Manitoba has been making the same rapid strides in medical matters as in all other departments. With the rapid influx of people came an equally rapid increase of doctors, until we can boast of the largest proportion of medical men to the total population of any province in the Dominion. Indeed, at present, the field is too well occupied, especially in our cities and towns. Without doubt, however, there are many points in rural districts where a doctor's presence would be hailed with pleasure, and where he could make a present living and be reasonably sure of a future reward commensurate with the arduous nature of his early work." Winnipeg having got a medical school started, is soon to have a hospital.

Doctors in Canada and the United States.—There are, says Dr. Sullivan, three thousand five hundred and seven physicians in Canada, or one to about fifteen hundred inhabitants. Indiana with about the same population as Ontario, has three thousand two hundred and seventy-five more doctors. Canada has about nine hundred medical students distributed among eight medical schools.

The Philadelphia Maternity Hospital.—The obstetrical staff of this hospital has filed a petition with the managers asking for the appointment of a female resident physician.

The Mosquito as a Yellow Fever Vaccinator.—The editor of the *St. Louis Courier of Medicine* gives an account of the studies of Dr. Carlos Finlay (*Cronica Medico quirurgica de la Habana*), with reference to mosquitoes and yellow fever. Dr. Finlay believes that he has demonstrated that yellow fever is inoculable by the sting of the Cuban day-mosquito during the third, fourth, fifth and sixth days of its evolution, but not during the first two days nor after the sixth, no matter what be the severity of the symptoms at those periods. The duration of incubation offers the same variations in the inoculated as in the natural disease, in either case varying from five to twenty-four days. The duration and intensity of the fever produced by inoculation by the mosquito appears to be in proportion to the number of punctures and the quantity of inoculable matter retained by the insect's sting. The inoculation by one or two punctures in no case produced any other morbid phenomena than those of benign natural yellow fever. Dr. Finlay thinks that the results already obtained warrant the assertion that the inoculation of yellow fever by one or two mosquito bites is a plausible means of imparting, without peril, immunity against the severe forms of the disease to which those are exposed who dwell in an infected district.

Through Quarantine.—Our India medical exchanges smell so strongly of smoke and carbolic acid as to give a realistic sensation of the existence of an epidemic.

A School of Dentistry is to be opened at the beginning of the winter term at the University of Leipzig, under the direction of Professor Dr. Fr. Hesse.

The Medical Department of the Prussian War Ministry, assisted by the Medical Department of the Bavarian and Wurtemberg War Ministries, and the Saxon Sanitary Board, are now bringing out a sanitary report of the German armies in the Franco-German war of 1870–71. The first and fourth volumes have just appeared.

Mr. Tait's Tribute to the Medical Colleges.—Mr. Lawson Tait has heralded his entrance to this country by some very flattering remarks. He wishes now that he had come to America instead of Germany to finish his medical education; and he prophesies that "ere long it will be to the medical schools of America rather than of Europe that English students will travel" before settling in practice. This is very complimentary, and it has already been appropriated by some of our contemporaries as a truthful tribute to the medical colleges of the United States, although Mr. Tait had not left the Dominion when he made the remark. Let us not be too easily caught by a somewhat overloaded compliment.

Dermatology in Paris and Vienna.—For a long time it has been noticeable that whoever writes letters from medical Vienna is sure to say a great deal about the dermatological teaching. Vienna has certainly won pre-eminence through the world in this department of medi-

cine. In a recent issue of *Le Progrès Medical* the editor devotes a long article to the subject of the decadence of dermatology in Paris, and its flourishing condition in Vienna. In Paris dermatology is at a low ebb because the clinics are not well organized and the material at disposal not utilized. There seems to be a good deal of official dulness and obstruction at the bottom of it all. In Vienna the clinics are well organized, the material is centralized, and all can be made use of. Perhaps the large excess of ignorance, filth, and syphilis has something to do with the brilliancy of the skin clinics. Vienna, though a great medical centre, has one of the highest mortality rates in Europe. *Le Progrès Medical* advises the reorganization of the Hôpital St. Louis, which contains a wealth of dermatological material.

Instruction in the Methods of Examining Micro-organisms.—It is well known that the ordinary examination of fluids and tissues for micro-organisms does not involve, generally, any very delicate or complex procedures. No doubt in time a practical acquaintance with these details will be thought as necessary to the student as dissection. Educational institutions already see the need of teaching "bacteriology." Recently the Berlin Government has taken a new step. Herr von Gossler, Minister of Public Worship, Education, and Medical Affairs, has ordered that a certain number of medical men are to be summoned to Berlin every year, to go through a course of study, lasting from a fortnight to three weeks, in order to learn the new methods of investigation connected with bacteria and micro-organisms, but chiefly to become acquainted with everything connected with the comma-bacillus and the methods of cultivating it according to Koch's method. The several Federal Governments have been already requested to select a number of medical men for this course, and to inform them to hold themselves in readiness to come to Berlin. The day for the commencement of the first course, says the *British Medical Journal*, has not yet been fixed, but will be very shortly.

The Cholera.—The epidemic continues to decline. The number of cases reported in Italy, September 17th, was 581; a week later the number was 435. During the same time the daily number of new cases in Naples has fallen from 463 to 251. The total number of deaths from cholera in Italy up to September 24th was 7,212. This represents fully twice that number of cases. The mortality in the past weeks, if correctly given, has averaged over fifty per cent., showing that the disease is very malignant or treatment is very ineffectual. It is probable, however, that the number of cases reported is much below the truth.

In the south of France the cholera continues to attack small towns, but with no great severity. There have as yet been only about 300 cases in Spain, and these chiefly in the Eastern Pyrenees.

Suicide of a Medical Student.—Mr. John F. Keating, a medical student in the Medical Department of New York University, committed suicide last week by shooting himself with a pistol. The cause given by him was the sickness and approaching death of his mother. It seems probable that he was not sane at the time.

THE SIMS MEMORIAL FUND.

To the Medical Profession and Others throughout the World:

The great achievements of Dr. J. Marion Sims call for some more lasting testimonial than obituaries and eulogies. To him medical science is indebted for much brilliant and original work, especially in gynecological surgery. Those who have been benefited by his teachings and new operations, and such as have had the direct advantage of his personal skill are among the first to recognize and acknowledge this debt.

To him is due the honor of giving the first strong impulse to the study of gynecological surgery in America.

It is believed that the medical profession everywhere, the vast number of women who owe their relief from suffering directly to him, and those who realize the benefits he first made possible, will gladly unite thus to honor the man through whose original and inventive genius such blessings have been conferred upon humanity.

At the suggestion of many friends, therefore, the subjoined committee has been organized, and it is proposed that a suitable monument be erected to his memory in the city of New York.

To this end the active co-operation of the medical profession and the many other friends of Dr. Sims throughout the world is respectfully solicited. Contributions of one dollar and upward may be forwarded to the journal which has been constituted the treasury of this fund—The Medical Record, New York.

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Reviews and Notices.

Osteotomy and Osteoclasis for Deformities of the Lower Extremities. By Charles T. Poore, Surgeon to St. Mary's Free Hospital for Children, New York. 8vo, pp. 187. New York: D. Appleton & Co. 1884.

Dr. Poore, who has already become so well known by journal articles on bone surgery, has condensed his experience in the work before us. He has succeeded in doing this in a very satisfactory way. He has gone over the subject in a very thorough manner, thus giving a concise treatise on osteotomy. This has been very much needed, considering the rapid progress which has been made in this department of surgery within the last few years, and the number of articles of rare value which have been scattered through the journals Dr. Poore has not only described in a very intelligent and concise manner all the different methods of osteotomy advocated by the leading surgeons abroad, but has studied the same from the light of a personal experience which has been sufficiently large for purposes of deduction and analysis. He is not backward in stating his preferences regarding procedures, but he does so with becoming respect for the opinions of others, and with a modest candor which is quite convincing. There is manifested throughout a disposition to give the facts to the reader with such conclusions as can be legitimately drawn from them.

Dr. Poore speaks strongly in favor of the chisel as against the saw, for the performance of osteotomy. The obvious reason for this is that he has never used any variety of saw, and is particularly skilful with a chisel of his own device, which, by the way, is a perfect instrument of its kind. It is a matter of personal preference for the chisel, which he has, under the circumstances, a perfect right to maintain. It is needless to follow the author through the various stages of his work; suffice it to say, however, that he puts his points fairly, and draws his conclusions logically as to methods of treatment recommended. His advocacy of MacEwen's supra-condyloid operation is what might be expected, and is in full accord with the verdict of the surgical section of the late meeting of the International Medical Congress. We cannot too strongly commend the clear and succinct manner in which the author weighs the indications for treatment in particular cases. In so doing he shows a knowledge of his subject which is as extensive as it is profound, and no one at all interested in orthopedy can read his conclusions without profit. His own cases, which are carefully reported, are valuable additions to the literature of the subject. These, together with others, which are only summarized, contain so much practical information and sound surgery that they give a special value to the work, altogether independent of its other excellences. It is a good book in every way, and we congratulate the author accordingly.

Atlas of Female Pelvic Anatomy. By D. Berry Hart, M.D., Lecturer on Midwifery and Diseases of Women, School of Medicine, Edinburgh, etc. With Preface by Alexander J. C. Skene, M.D., Professor Medical and Surgical Diseases of Women, Long Island College Hospital, Brooklyn, N. Y. 4to, pp. 89. New York: D. Appleton & Co. 1884.

"In this Atlas," says the author in his preface, "I have tried to give a faithful account of the anatomy of the female pelvic organs." How he has succeeded can only be appreciated by a careful study of the numerous magnificently executed and accurately delineated plates to be found in this superbly printed volume. It is hardly possible to give any idea of their excellence by any description. They are simply magnificent, and so completely meet every desideratum of the anatomist and practical surgeon that nothing is left to be desired. Very many of the drawings are original in design and novel in execution, illustrating in outline and detail many points in relative anatomy not generally referred to by leading authorities, and in every particular, so far as we know to the contrary, bringing our knowledge up to the level of the latest investigations of the anatomy of the parts, descriptive and topographical. Take, for instance, the study of the female perineum, the reflections of the pelvic fascia and natural relations of the healthy uterus. Many of the plates are beautifully colored, with the principal organs indicated by abbreviated names upon them, after the manner of Gray. This lettering does not in any way interfere with the strikingly artistic effect of the plates as a whole, while they greatly aid, as will be obvious to every student, the proper study of relations of different parts to each other without constant reference to the text. The outline drawings are also models of their kind and do not aim at giving too much in one figure. One point is illustrated at a time, and the collection makes a consistent whole with the more elaborately and accurately detailed chromo-lithographic illustrations. The micro-photographic representations of tissue formation are well executed, but are rather disappointing in their small number, and in some instances sharpness of detail. This is, however, only speaking comparatively in regard to the other plates throughout the work.

The descriptive text is not voluminous. This would hardly be considered necessary in a work of this kind, the main objects of which are to teach by the pencil rather than by the pen. In the higher walks of anatomy, where this remarkable atlas finds a leading place, there is no need for much detail description. The student is expected to have mastered the elements and to have gone on. Hence, evidently following out this idea, the author contents himself mostly with straightforward demonstrations, giving only such word descriptions as shall enable him to make his subject sufficiently understood in consistent outline.

As a new work by a well-known author there is a natural prejudice in its favor, but this becomes the more deeply rooted as we constantly get new views of old fields, new landmarks for better outlooks, new light upon heretofore obscure points. To particularize would be to review all the recent advances made by leading anatomists in the study of female pelvic anatomy—a detail which would be for the purpose of this notice plainly unnecessary. In a word, we can, after the most critical study of its contents, say with the distinguished editor, Professor Skene, that "it is far in advance of any work of its kind yet produced." As such it becomes a necessity for the progressive gynecologist, for the operating surgeon, and for the leading general practitioner. We congratulate the publishers on the reproduction of this grand work and bespeak for it a becoming appreciation by the profession of this country.

Lessons in Longevity: Paragraphs on Home Hygiene and the Art of Prolonging Life. By John B. Hamilton, M.D. Washington: William H. Morrison. 1884.

This modest little pamphlet contains much sound sense as well as sanitary wisdom. The author possesses a graceful style and knows how to adorn his texts, mingling *dulce et utile*.

Origin of Eating Goose on Michaelmas Day.—Queen Elizabeth on her way to Tilbury Fort on September 29, 1589, dined on roast goose and Burgundy wine. She fed so heartily that she required an extra half pint of Burgundy, with which she drank "Destruction to the Spanish Armada." She had scarcely set her glass down when news came of the destruction of the Spanish fleet by a storm. She immediately took another bumper to digest the good news as well as the goose, and ordered that roast goose should be served up to her every year on that day. The court followed the custom, and the people generally soon adopted it. Burgundy wine could be taken at all times.

International Medical Congress.

EIGHTH SESSION.

Held at Copenhagen, Denmark, August 10–16, 1884.

REPORTS OF SECTIONS.

SECTION ON DISEASES OF CHILDREN.

MONDAY, AUGUST 11TH—FIRST DAY.

THE Section was called to order by the President, PROFESSOR HIRSCHSPRUNG, of Copenhagen, who welcomed the members, outlined briefly the work that was to be done, and expressed the hope that the science of pediatrics would receive a new impetus from the labors of the eminent men who had given their adherence to this important section.

He then announced the election of the following officers:

PRESIDENTS.

Professors A. Jacobi, of New York, and Rauchfuss, of St. Petersburg.

SECRETARIES.

Drs. Israel and Wichmann, both of Copenhagen.

The Chair was then taken by DR. JACOBI.

DR. RAUCHFUSS read a paper on

THE EDUCATIONAL VALUE OF POLICLINICS

for the treatment of dieases of children. He maintained that not the least of the benefits that resulted from policlinics was the diffusion throughout the community, and especially among the poor and the ignorant, of a knowledge of hygiene. If ignorant mothers could only be impressed with the importance of observing at least the elementary rules of hygiene, a vast amount of good would be accomplished. Prevention was better than cure.

DR. A. BAGINSKY, of Berlin, then read a communication entitled

THE PATHOLOGY AND TREATMENT OF CHOLERA INFANTUM.

This disease, the author said, is to be reckoned, in Berlin at least, as the chief cause of death in infants. The number of cases of the disease in any given summer is in direct proportion to the height of the temperature of the air, but seems to be only indirectly dependent upon the height of the temperature of the ground, the lowering of the level of the ground water, or the degree of moisture of the atmosphere. The quality of the nourishment and the degree of care which the child receives, as well as the situation of the dwelling, are very important factors in the etiology. Teething has no direct influence on the disease.

As regards pathology, the different forms of summer diarrhœa of infants may be divided into: 1, primary dyspeptic catarrh; 2, genuine cholera infantum (cholera nostras); 2, follicular disease of the intestinal tract; 4, secondary dyspeptic catarrh; and 5, intestinal atrophy. All these processes are as links in a chain, and may pass one into the other. Post-mortem examinations prove the correctness of this statement. Microorganisms are found in the walls of the intestines, and are perhaps not unconcerned in the causation of the disease. The therapeutic management varies according to the form of the disease with which we have to deal.

PROFESSOR HIRSCHSPRUNG, of Copenhagen, then read a paper summing up the results of

OBSERVATIONS ON HÆMOGLOBINURIA

during the first year of life, and gave a demonstration of this condition.

DR. H. REHN, of Frankfort-on-the-Main, followed with a paper on

SO-CALLED ACUTE RICKETS,

in which he attempted to answer the question whether the experiences of later years have enabled us to determine the position of the affection known as acute rachitis.

Most of the papers elicited more or less discussion from those present.

No session was held on Tuesday, August 12th, but the members of the Section, together with those of the Section on Hygiene and State Medicine, made an excursion to the

ASYLUM FOR YOUNG GIRLS

at the Château Jaegerspris near Copenhagen.

On Wednesday, August 13th, no meetings of Sections were held, as all the members of the Congress joined in the excursions to Elsinore and other places.

THURSDAY, AUGUST 14TH—FOURTH DAY.

In the morning the Section held a joint meeting with that on Hygiene and State Medicine.

DR. SCHEPELERN, of Refsnaes, read a paper on

THE TREATMENT OF CHRONIC DISEASES OF CHILDREN AT SEA-COAST HOSPITALS.

The speaker advanced the proposition that sea-side sanitaria ought to be kept open the entire year, winter as well as summer. He then spoke of the good results following a winter course of treatment, dwelling more especially upon the value of hydrotherapy in this connection. Among the diseases of childhood in which great benefit may be derived by a course of treatment at sea-side sanitaria, the author spoke more particularly of the scrofulous affections. One point upon which he dwelt at some length was the value of an increase in weight as evidence of the favorable progress toward recovery in scrofula.

DR. ENGELSTED, of Copenhagen, read a second paper on the same subject. His views did not differ substantially from those of the preceding speaker.

At the afternoon session DR. RAUCHFUSS, of St. Petersburg, read a paper on

CROUP,

in which he argued the question as to how far this condition can be considered, from a clinical point of view, as a well-defined morbid entity.

A discussion followed, which was participated in by PROFESSOR VIRCHOW, of Berlin, and others.

FRIDAY, AUGUST 15TH—FIFTH DAY.

PROFESSOR RAUCHFUSS, of St. Petersburg, occupied the chair.

DR. RUPPRECHT, of Dresden, read a paper on the

ANTISEPTIC TREATMENT OF WOUNDS IN CHILDHOOD.

The author thought the best disinfectant was a one-third per cent. solution of salicylic acid, or for very septic wounds, a four to eight per cent. solution of chloride of zinc. One of the poorest materials for use in operations on children was carbolic acid. The general admissibility of corrosive sublimate solution (1 to 1,000) in childhood was, he thought, questionable. For certain wounds iodoform in small quantities is indispensable.

The best material for dressings was gauze impregnated with salicylic acid (five to ten per cent.) or corrosive sublimate (1 part per 1,000), while carbolized gauze was objectionable. Wood-wool cushions are of advantage for certain wounds. Dry dressings are best for fresh, as well as for large suppurating wounds, but for small suppurating wounds moist dressings are more suitable. In these, however, neither carbolic acid nor corrosive sublimate should ever be used.

In order to prevent soiling of the dressings with urine he favored covering them with a waterproof cloth, the

edges of the dressings being smeared with grease. Other methods of avoiding irritation from the urine were vertical suspension of the child. frequent changing of the dressings, or the permanent bath.

In concluding, the author pointed out the special indications for the employment of one or the other mode of treatment of wounds occurring in children.

Professor Jacobi, of New York, then presented a communication on

PRIMARY SARCOMA OF THE KIDNEY

in the new-born and in the young.

This was followed by a paper of Dr. Sophus Meyer, of Copenhagen, upon the

PROPHYLACTIC TREATMENT OF OPHTHALMO-BLENNORRHŒA NEONATORUM.

Ophthalmia neonatorum is an essentially dangerous affection, and measures of prophylaxis are therefore of especial importance. We do not yet know with certainty the cause of the disease, and we ought to encourage all investigations tending to elucidate this matter. Among the measures employed of late years, that of Credé may be considered the best. It is certainly a very satisfactory one, as, since its introduction into lying in institutions the malady has almost disappeared. Credé's method is not dangerous, and can be employed by midwives just as well as by physicians. The speaker concluded by urging upon his hearers the necessity of inducing midwives generally to make a constant use of the method in every case.

A paper was then read by Professors Hirschsprung, of Copenhagen, and Ribbing, of Lund, on

INTESTINAL INVAGINATION.

This condition was treated of as it occurs in children, and some remarks were made upon its comparative frequence in different countries. The authors endeavored to show that the great difference in this respect, as shown by the statistics of the several countries mentioned, was rather apparent than real.

Professor Faye, of Stockholm, followed with some remarks on

THE TREATMENT OF SCOLIOSIS.

At the conclusion of this paper the session adjourned.

Saturday, August 16th—Sixth Day.

In the morning a joint session of the Sections on Pediatrics and on Hygiene and State Medicine was held.

Two highly interesting papers were read by Mr. Malling-Hansen, of Copenhagen, and Dr. Vahl, of Jaegerspris, on the

NORMAL INCREASE OF WEIGHT IN ADVANCED CHILDHOOD.

The observations were made upon girls, from four to fifteen years of age, inmates of the Jaegerspris Asylum. The children were weighed in April and October of each year, from 1874 to 1883. It was found that the normal weight of girls at this age increases in regular progression from thirty-two and a half to ninety-eight and a half pounds (16.25 to 49.25 kilos). Up to the end of the fourteenth year the annual increment is eleven per cent. of the weight of the previous year, but after this time the rate of increase falls off somewhat. The increase during the six warmer months is greater than in the six colder months, in the proportion of four to three.

At the afternoon session Professor Medin, of Stockholm, read a paper on the

TUBERCULAR MENINGITIS OF EARLY INFANCY.

Tuberculosis, the speaker maintained, is frequent in the new-born, occurring sometimes in very severe epidemics, but tubercular meningitis is rare. Even epidemic cerebro-spinal meningitis is of more common occurrence in young infants. The author then spoke of the influence of age and sex and of the seasons, and pointed out the differences in the symptoms and course of the disease as it occurs in young infants and in children of a more advanced age. Tuberculosis of the meninges may occur, he said, without producing meningitis, and in such cases there are no symptoms by which the condition can be recognized. The paper was illustrated with a number of charts.

Professor Prévost then read a communication from Professor d'Espine, of Geneva, who was absent, on

A RAPIDLY CURABLE FORM OF INFANTILE SPINAL PARALYSIS.

At the conclusion of this paper

ADDRESSES

were made to the Section by the presidents, Professor Rauchfuss, of St. Petersburg, in French; Professor Jacobi, of New York, in English; and Professor Hirschsprung, of Copenhagen, in German.

According to the announcement of the last-named speaker, the labors of the Section were now concluded.

COMBINED SECTIONS OF ANATOMY AND PHYSIOLOGY.

Tuesday, August 12th—Second Day.

Professor v. Ebner presented a communication on behalf of Professor Rollet, on the

HISTOLOGY OF STRIATED MUSCLE.

The author of the paper believed that the primary element in the muscular fibre is the fibrilla, the Cohnheim fields being a section of a number of these fibrilla with an intermediate substance. This intermediate substance not only surrounds the fibrilla, but in some species there is a layer of it between the sarcolemma and the fibrillæ. There is a network of minute fibres which embraces the elements of which Cohnheim's fields are a section. The transverse disks are produced by this transverse network under the influence of the various reagents. The varied appearances observed in a muscular fibre are caused by the varying relations of the unformed substance, the fibrilla and this network.

In the discussion which followed the reading of this paper Professors Engelmann and Retzius stated that they agreed with the author on the main points in the paper.

Dr. Thin remarked that in all essential points the structure of striped muscular fibre, as described by the author of the paper, was that first expounded by himself in 1874, in two papers published respectively in the "Proceedings of the Royal Society" and the *Edinburgh Medical Journal*. The network described by Rollet in the paper just read, and also by Retzius in his monograph published last year, is the same as that described and figured by himself in the *Edinburgh Medical Journal*.

Professor Kronecker, of Berlin, then read a paper on

THE CENTRE OF CO-ORDINATION FOR THE MOVEMENTS OF THE VENTRICLES OF THE HEART.

The approximate position of this centre in the dog was, the speaker said, about one centimetre behind the descending branch of the left coronary artery. Injury to this centre stopped pulsation at once, irregular vibrations and twitchings alone remaining. By a series of experiments, Professor Kronecker has ascertained that this centre is neither inhibitory nor motor, but distinctly co-ordinating.

Dr. Gaskell, of Cambridge, read a paper on

INHIBITORY ACTIONS AND THE INHIBITORY NERVES IN GENERAL.

After referring in detail to the present views on inhibitory and excitor impulses in single nerve-trunks, and to Foster's experiments on direct inhibition of the cardiac

muscle of the snail, Dr. Gaskell described experiments on portions of the cardiac muscle of the tortoise, upon crocodiles in which the vagi had been mutilated, so as to insure complete degeneration of their cardiac periphery, and upon the cardiac nerves of frogs in which the vagus and sympathetic rami were completely isolated. Some recent experiments in the Cambridge laboratory were also quoted as entirely disposing of Foster's experiment upon the snail's heart. Dr. Gaskell's experiments, the record of which in the shape of most complete polygraphic tracings was shown, led him conclusively to state that muscle functions are not inhibited except through nerve stimuli. As to the condition of inhibited tissues or organs, whether the state is one of death or of increased potential energy, he emphatically expressed his opinion that the latter was the actual condition. He showed tracings of the cardiac contractions during stimulation of the sympathetic, after or during stimulation of the vagus, which supported him in this view.

SECTION ON DERMATOLOGY AND SYPHILIS.

THE ETIOLOGY OF LUPUS.

Professor Doutrelepont, of Bonn, opened the discussion by reading a paper in which he stated his belief that lupus is really a tuberculosis of the skin. Not only are the histological characters of the lupus nodules and the miliary tubercle very similar, but the specific bacillus of tuberculosis is found in both. The clinical course of the two diseases also presents, as he thought, some very marked points of resemblance—the slow course, for example, of some cases of phthisis, accompanied with many relapses. But the most important and most direct proof has been found in the inoculation of small pieces of lupus tissue into the cornea of rabbits, and the growth of distinct tubercle at the point of inoculation.

Dr. Leloir, of Paris, also read a paper dealing with the same points, and quoted a case of undoubted lupus of the bones, in which the disease resembled tuberculosis. He, too, had inoculated animals with lupus, and thereby produced tuberculosis.

Professor Kaposi, of Vienna, said that before the bacteria time it used to be remarked how unusually free from tuberculosis lupus patients were. He had seen 1,200 cases of lupus in twenty years, and had never seen any connection between the two diseases, although some patients had been covered with the lupus for many years. Real tuberculosis of the skin, of which he had seen fifteen cases, was a rare and entirely different disease, in which the actual miliary tubercles were seen plainly on the most superficial layers of the skin, and it was always rapidly fatal. Now, however, lupus, which is a perfectly clear and distinct clinical entity, has been confused with tuberculosis.

Professor Pick, of Prague, had long been led to suspect a close relationship between lupus and tuberculosis, but could not establish a satisfactory clinical identity. The discovery of giant cells at first promised to establish this connection, but the theory of their specificity was afterward disproved. The discovery of the bacillus tuberculosis had had a more satisfactory result. It had been found that the bacillus was always present in abundance in certain stages of the disease, and that this was the case even where no tubercular condition of other organs was present. Observers are, however, divided as to whether the bacillus is causal. Professor Pick considers that it is, and thinks that tuberculosis of the skin may exist as lupus vulgaris, as tuberculosis cutis of Kaposi, or in many other possibly not yet discovered forms, which may differ exceedingly, just as syphilides and gummata differ exceedingly, and which it may take a long time to distinguish and classify, as was the case with lupus and the serpiginous eruptions of syphilis. Although tuberculosis cutis is not lupus, lupus might still be, and probably is, a tuberculosis.

Professor Neisser, of Breslau, vigorously opposed Kaposi, the value of whose statistics he disputed, since the case had not been examined with a view to settling this question. There was a slow and a galloping syphilis, and there might be similar conditions in tuberculosis of the skin. He considered that the slow course and frequent recurrences in lupus were very like the course and relapses of tuberculosis, and this latter, too, like lupus, might last for years. Kaposi seemed to simply disbelieve in the bacillus tuberculosis, but with the present weight of scientific evidence on its side, Kaposi certainly would have to undertake the proof that lupus was not a tuberculosis in order to support his position.

Dr. Unna, of Hamburg, agreed with Doutrelepont and thinks with Pick that there are a series of bacilloses of the skin, all containing the bacillus tuberculosis. He knows of four such affections at the present time, viz., lupus vulgaris, tuberculosis cutis Kaposi, lupus papillaris Aubert, and scrofulous eczema, followed by caseous glands. He finds the bacilli are obtainable in quantity by partially digesting hardened specimens and examining the precipitate of what has fallen.

Professor Edward Lange, of Innsbruck, said that the murderous disease described by Kaposi did not correspond to ordinary mild, often curable, cases of tuberculosis. There was probably some form of skin tuberculosis which did so correspond, just as there were cases of carcinoma which were rapidly fatal, and cases which dragged on for decades.

Dr. Goldscheiden gave an interesting address on the

SPECIFIC SENSIBILITY OF THE SKIN.

He strongly supported Helmholtz's theory that every nerve, however excited, gave rise to only one specific perception in the cerebral ganglion cell with which it was connected. His investigations had shown him that there were only certain points which were capable of feeling heat, while a completely different and complementary set perceived only cold. It was immaterial how these points were excited, whether mechanically or by temperature change or electrically, the effect was the same; this fact, of course, refuted the old theory of perception of heat and cold by simple increase or decrease of the amount of heat in the nerve. These temperature nerves when excited give rise to no pain, nor do they possess any sensibility. Only certain "pressure points" possess acute specific sensibility, and outside these there exists only a diffuse indefinite perception. The points at which pain is appreciated are also quite distinct and very sensitive to various irritations. These pressure and pain points are always complementary to the points at which heat and cold are perceived. The touch nerves, like them, are always arranged in areolæ, and hence the necessity of passing the finger over any body which we are feeling, until an areola is met with capable of appreciating the shape and surface of the particular body. All these functions improve notably with education, as seen especially in the case of blind people. But there are many areas normally destitute of all appreciation of one or more of these different modes of sensibility.

Dr. Armauer Hansen, of Bergen, spoke at length on the etiology and pathology of lepra. He exhibited patients to show the difference between the tubercular form and the macular. The former was almost always fatal in nine or ten years, and the latter was often cured. The anæsthesia and atrophy which follow are effects of the healing process, not of the leprosy, and necrosis of the affected parts is always secondary to injury. The paralyses, too, are local; there are never any traces of spinal lesions to be found clinically or microscopically. He insisted that lepra was not an hereditary, but a specific contagious disease; the recurring crops of nodules showed its anti-inoculability, and since the growths tend to heal, it must be specific. There is, moreover, no anatomical correlation between the parts affected as in the metastasis of neoplasms. The cause of the disease had long been obscure. Years ago he had noticed

peculiar brown cells, which were always present in microscopic sections of lepra. In 1871 he described minute moving rods in the contents of a breaking down tubercle, and immediately after Koch's discovery he found the bacillus leprae by applying the same methods. He had never found them in anæsthetic patches, but Ahning has found them in anæsthetic nerves. The speaker and Professor Neisser have both cultivated them. Inoculation on rabbits and cats (Hansen), and on fish (Köbner and Hansen) had been unsuccessful, but Neisser had produced a new growth by inoculating a dog. No animal has, however, been lepraized as yet. He does not believe in the heredity of a contagious disease; a disease may be congenital without being hereditary, for example, small-pox. Heredity and the transmission of such a disease as syphilis are entirely different matters; the latter may develop late, and is incapable of atavism, etc. Relationship, even, with leprous people, is by no means always present. The inhabitants of a valley become in time all more or less related, and the members of one family naturally come into closer contact with each other than with outsiders, hence the apparent frequency of the spread among relations. Isolation is necessary, for although the disease is spontaneously curable, we cannot cure it; but the effect of isolating the cases in Norway has been effective in reducing the number of lepers by nearly one-half in twenty years.

Professor Neisser agreed in Hansen's views as to contagiousness and heredity in lepra. The spores which Dr. Hansen had spoken of were probably vacuoles.

Professor Pick read a paper on

EXCISION OF THE INITIAL SCLEROSIS IN SYPHILIS.

He confined his remarks to *hard* chancres, and distinguished carefully between those cases in which the glands were indurated and those in which they were not. Where the glands are affected they must also be excised, but in such cases, almost without exception, whether excision is practised or not, general symptoms make their appearance. The conditions under which the operation may be performed are only partially known. Simple excision of the sclerosis where the glands are affected will never give success, and no excision avails when the deep glands are swollen. Pick considers the effect on the therapeutics is but slight, mostly only a delay in the appearance of the general symptoms. The operation has, however, served to show that the indurated sclerosis is not the expression of general syphilis. The lymphatics have recently been found to be much enlarged in these cases, and Pick believes that the syphilitic poison passes into the organism through these, and not as Auspitz believes, entirely through the blood.

Dr. Unna, of Hamburg, believes that syphilis spreads not by any one path, but by both the blood-vessels, lymph-vessels, and by simple contiguity of tissue.

Professor Neisser, of Breslau, observed that although it was not yet certain by what path the syphilitic virus entered the system, still since it was a bacterial virus, there was no theoretical reason why it should not be prevented from entering by timely destruction of the bacteria.

Professor Bergh, of Copenhagen, gave accurate statistics extending over some years, and showing the comparative worthlessness of the operation as a protective measure.

Drs. Leloir and Barthelemy, of Paris, quoted most favorable cases in which excision, a few hours after the first appearance of the chancre, failed to prevent infection, and the latter stated that French opinion was now decidedly opposed to the procedure.

Dr. Martineau, of Paris, in opposition to the German speakers, regarded the chancre as a manifestation of general infection, and considered it, therefore, to be manifestly useless to excise it.

Professor Liebreich, of Berlin, in a paper on

THE TREATMENT OF SYPHILIS BY MERCURIAL INJECTIONS,

said he found that certain conditions were requisite in any mercurial compound which was to be subcutaneously injected, viz., it must not precipitate albumen, must be indifferent to the connective tissue of the skin, must not be decomposed by an alkaline solution, must be easily broken up, so that with sulphur sulphide of mercury is precipitated. Corrosive sublimate forms insoluble compounds with albumen, and which is only absorbed when these are broken up; it, moreover, breaks all the other conditions except the last. Tannates and citrates of mercury also unite with albumen and reach the blood in complicated combinations. A body which fulfils all these conditions is found in the formamide of mercury, which is easily prepared by precipitating the oxide by carbonate of ammonia and dissolving it in formamide. Amides of a number of other fatty acids also work well. If injected in quantity they form sloughs in the bowels during elimination (as does the sublimate) showing that they can work efficiently, the mercury in the compound being simply masked by the amide. They cause neither pain nor irritation of the tissues, and the dose is somewhat less than that of sublimate. It is, above all, important that the course of injections must be several times repeated; it is impossible to be sure of curing by one course alone. In the midst of the injections the case sometimes ceases to improve; the original vigor, however, can be rapidly restored by giving a good diet, with plenty of chloride of sodium, this salt and chloride of ammonium both assisting powerfully as "help cures."

Dr. Martineau said he had used injections exclusively in the treatment of syphilis for the last few years, and believed that it was the only reliable method, assuring a cure and causing no stomatitis or other alimentary troubles. In no case was the disease itself cured, but merely the manifestations, and in doing this, mercury injected subcutaneously occupied less than half the time required by the other methods.

There was a general consensus of opinion among the after speakers that the injection of mercurials was a valuable method of treating syphilis, but by no means the only one. No one method suited all cases. Meisser thought that the injections should be smaller and more frequent, and considered that the formamides eliminated too quickly.

Professor Doutrelepont said he does not believe formamide to be absolutely the best form for injection. All salts when injected in a sufficient therapeutic dose, may cause stomatitis.

Dr. Shoemaker, of Philadelphia, after prolonged experiments on the various methods of injecting mercury, had come back to the simple solution of sublimate in water, as the most effectual and least irritating.

Dr. Wulff, of Strasburg, had made and injected the formamides five years ago. He always used them perfectly freshly made from triturated solutions; they then work quickly and well.

Dr. Unna advocated the use of keratinized mercurial pills, which dissolve in the alkaline juices of the small intestine, leaving the stomach untouched; in this way the irritation caused by injection may be avoided.

Dr. Barthelemy always used the peptones for injection and found that they acted quickly, but believed that pills were by far the best and simplest method for continued treatment.

Professor Kaposi found injections useful, but considered that inunction was by far the quickest and most vigorous method of cure.

Most of the speakers considered that although statistics were a valuable help in deciding the relative merits of the different methods of cure, especially the statistics of venereal hospitals for prostitutes, yet the judgment of the relative merits of different methods depended mostly

on the good clinical observation of the individual experimenter.

INOCULATION OF SYPHILIS IN ANIMALS.

Dr. Martineau had successfully inoculated a monkey with syphilis and produced a distinct chancre, erosive and ulcerative syphilides of the skin and pharynx, and hypertrophic papular syphilides of the scrotum and thigh.

Professor Pick had seen the monkey which Klebs claimed to have syphilized. He was only acquainted with syphilis in the human subject, but the eruption which broke out in the monkey looked to him more like a varicella accidentally inoculated, than like any syphilitic eruption in man.

PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, June 6, 1884.

Samuel Sexton, M.D., President, *pro tem.*

Dr. Wm. T. Lusk read the paper of the evening, entitled:

SUDDEN DEATH IN CHILDBIRTH.

The case illustrating such had the following history: The patient was a primipara, healthy, and twenty-three years of age. I first saw her January 1st of present year at 7 A.M. Patient said pains had begun on previous afternoon, and she had paced the floor all night. She said that when in motion she found it easier to bear her pains. Examination: Extreme tenderness of vagina and cervix; cervical canal dilated by head, os extended, size of half dollar; head covered tightly by membranes, no pouch. At 11 o'clock little progress. Gave chloroform and pushed up head so as to allow bag of waters to form. This manœuvre was followed by rapid dilatation. Head in twenty minutes on perineal floor. I then urged forceps. Patient wished "glory of having her baby herself." Waited at her instance until between 1 and 2 o'clock. Patient suddenly lost color and seemed dazed when spoken to. Applied forceps to head at vulva. Easy extraction followed by some hemorrhage, but the latter was quickly controlled. Patient's face showed signs of complete collapse. Stimulants, warm hypodermics of brandy, and hot tea were given at short intervals. Apparent rally. At 7 P.M. went to dinner, thinking period of safety reached. Patient suddenly turned in bed, and pulse became very feeble. There was a slight rally, and then came death. Absence of respiratory troubles excluded pulmonary embolism either from venous thrombi or from air. The associated symptoms were those of surgical shock, to which the patient was probably predisposed by the ante-partum exhaustion. The writer argued against the rejection of surgical shock among the causes of sudden death in childbed, holding that the entry of air into veins, embolism, and pulmonary thrombosis are insufficient to account for all cases.

Dr. G. F. Shrady mentioned two cases which had just been published in The Medical Record, and in which death, as he thought Dr. Lusk would agree, was due probably to shock. He had seen in journals the reports of two other cases within the last six months.

Dr. Lusk remarked that text-books on obstetrics assumed that it was not possible for a woman to die of shock in parturition, but from what he had observed, he was inclined to believe that death in lying-in women was not infrequently produced by that cause.

Dr. Shrady thought that death in Dr. Lusk's case was best explained on the supposition that it was produced by shock; for the phenomena were exactly what occurred in surgical practice from sudden loss of blood in a nervous patient.

Dr. Dana asked if the patient's heart was examined.

Dr. Lusk said he examined the heart and did not find any sounds to indicate the presence of cardiac disease, and the patient was so young and had enjoyed such perfect health that he thought any change affecting the muscular structure of the heart could be reasonably excluded.

Dr. Dana asked if any pathological evidence had been obtained to sustain the view that shock was due to paralysis of the splanchnic nerves.

Dr. Lusk replied that the view was the result of experiments on animals.

Dr. Dana thought that experiments on animals proved just the opposite, because when these nerves were completely divided, causing paralysis of the blood-vessels supplying these viscera, the animals do not die.

Dr. Lusk said the experiments were performed by striking upon the abdominal walls, producing paralysis of the blood-vessels and withdrawal of blood from the heart.

Dr. Dana remarked that striking the abdomen, especially when the peritoneum was inflamed, might stop the heart, but it did so by affecting certain sensory nerves.

Dr. Ball asked if the effect was not too sudden to account for it upon the supposition of withdrawal of blood from the heart.

Dr. Lusk remarked that he did not feel called upon to defend the theory of the production of shock, but in the most recent articles on shock the theory of Fisher was that which had been adopted, and to him shock as a cause of death in the cases under consideration seemed to be the most reasonable explanation which had been offered.

Dr. Dana asked further if it was not a clinical fact that death had occurred with chloroform some time after the anæsthetic had been removed.

Dr Lusk said that such cases had been reported, but he was not aware that any had been reported in which death occurred after the patient had regained complete consciousness, and during the administration showed no undue sensitiveness to the anæsthetic. It had been suggested by Dr. Delafield that this was the explanation of sudden death in these cases, but on looking over the literature of the subject, Dr. Lusk had found that the cases occurred so much more frequently before chloroform was introduced into obstetric practice than they had since that the fact seemed to disprove the supposition that death was due to chloroform.

In Dr. Lusk's case there was an interval of two hours between the first and second administration, and during this interval the woman was perfectly conscious and gave no evidence that she had been unduly affected by the chloroform; at the first it was administered in moderate quantities for half an hour, and at the second administration it was given for fifteen minutes.

Dr. E. L. Partridge alluded to two cases of sudden death following labor. One was a case in which the woman died suddenly on the twelfth day after confinement without any unfavorable symptoms during the puerperal period, except a moderate cellulitis, from which she recovered promptly, all the symptoms disappearing, and the pulse and temperature becoming normal. One morning, while the nurse and physician were standing at the bedside, just after the pulse had been noted at 88 and the temperature 99° F., the patient asked for a drink of water in the usual way, and within ten minutes was dead, without a symptom or movement. The pulse continued to beat two or three moments after respiration ceased.

The autopsy revealed an abscess of the cerebellum. The patient had had ear trouble, without discharge or anything to direct attention to it during her stay in the hospital (Nursery and Child's). It was not supposed that parturition had anything to do with the abscess in the cerebellum. But the case was interesting as an illustration of the fact that parturient women can die from causes other than those connected with the process of labor.

In the other case, the woman died of shock and nervous prostration following tedious labor. The forceps were applied early; there was no hemorrhage, but the

woman died within twenty-four hours. At the autopsy nothing was found to explain the sudden death.

In absence of post-mortem examination he would not be willing to say that death in Dr. Lusk's case was due to shock; and at the same time he did not feel willing to say that she did not die of shock.

Dr. Lusk said he assumed that a woman who took no rest for the length of time his patient abstained from it must necessarily place herself in an unfavorable condition, and he had believed that such symptoms were due to exhaustion.

Dr. A. A. Smith narrated a case as follows: In the year 1873 he was asked to attend a young woman in confinement. He promised to visit her on a Tuesday. The mother sent for him on Monday afternoon, and when he arrived he heard the following history: On Saturday afternoon the patient reached up to pull the window down, and, as she did so, she felt something give way, and was seized at once with sharp pain in the lower part of the abdomen. She sat down in a chair for a short time, but, not feeling very well, went to bed. On the following day she felt tolerably well, but on Monday Dr. Smith was sent for on account of sharp pain and quite free hemorrhage. Vaginal examination revealed the fact that labor had begun, and the case progressed very well up to three hours afterward, when the woman began to complain of feeling weak, and, although the child's head was quite well down in the pelvis, there seemed to be a tumor of considerable size above. He was unable to obtain sufficient evidence to make it certain that there was internal hemorrhage, but delivered the woman at once of a child weighing six and a-half pounds, and with the delivery there was rise of pulse and evidence of hemorrhage, as shown by one great gush of blood with the delivery of the child. No further hemorrhage occurred, but the woman died within an hour after the birth of the child, as the result of exhaustion and shock caused by antepartum loss of blood. Dr. Smith believed that if he could have diagnosticated ante-partum hemorrhage he could have saved the patient's life by the hypodermic injections of ergot and atropia, etc.

SUCCESSFUL OPERATION FOR EXSTROVERSION OF THE BLADDER.

Dr. George F. Shrady presented a diagram which illustrated the successive steps in an operation he had performed at the Presbyterian Hospital, in a case of exstroversion of the bladder.

The patient was a male, five months old. A triangular skin-flap with its apex just below the umbilicus was dissected downward to the upper surface of the exposed posterior wall of the bladder and turned downward like the leaf of a book, the base of the flap being left attached. By this means the exstroversion was completely covered, leaving two raw triangular surfaces exposed with a common base. One of these surfaces was the bed of the flap, and the other the posterior surface of reversed flap itself. To cover the raw surface of the reversed flap a quadrilateral flap, looking downward and inward, including skin from the lower portion of abdomen, groin, and sides of the scrotum, was made on either side and turned inward so that the lower and free extremities of each could be joined in the median line. The triangular raw surface of the bed of the reversed flap above was converted into an inverted T-shaped wound by loosening the basal angles of the raw surface and joining them in the median line. The beds of the quadrilateral flaps in the groin, which were triangular in shape, were also converted into T-shaped wounds by carefully sliding the opposing edges toward each other.

The reversed flap was first sewed in position, completely covering in the bladder, one thread of each suture being left long so as to be brought out externally from between the edges of the superimposed flaps. The quadrilateral flaps were then sewed in place, and then the upper raw surfaces and the beds of the quadrilateral flaps were closed as indicated.

The wounds healed by first intention, except at one unimportant point, which subsequently closed by granulation, and the child made a perfect recovery, the urine escaping only by a small opening over the pubes.

A condition of epispadias existed, which Dr. Shrady intended to remedy by subsequent operations when the child was old enough to warrant them.[1]

EXTRA-UTERINE PREGNANCY.

Dr. Charles S. Ward presented the child and placenta removed by operation in a case of extra-uterine pregnancy, with the following history. Mrs. B——, twenty-three years of age, the mother of one child, and no miscarriages. Her child was born four years ago, and the labor was normal. Her menstrual history was normal until last July, when a slight show became constant until lately. She first noticed enlargement of her abdomen in August last. The abdomen gradually increased in size, and movements were first noticed in September, and ceased in March last. The woman thought she was at full term in March. During the last three months she had had aching in the pelvis. The mammary signs were normal until last March. During the last three weeks she has lost flesh. Dr. Thomas diagnosticated abdominal pregnancy when he saw the woman in March. He performed laparotomy June 5th, and removed the fœtus with a part of the placenta. The abdomen presented the appearance of that of a woman in the *seventh* month of pregnancy. On palpation, an elastic tumor could be felt, and per vaginam the uterus could be recognized as anteverted, somewhat enlarged, with a cervix normal to the touch, and ballottement was absent. Neither was there any body to be detected, except by the fact that something filled the superior strait of the pelvis. Up to three months ago the woman believed that she was pregnant. Except for the extreme degree of pigmentation of the abdominal walls, Dr. Ward would have felt sure that extra-uterine pregnancy did not exist.

On making an incision through the abdominal walls in the median line, he reached first a brownish-black looking body, which presented very much the appearance of the liver. After opening the membrane about a quart of fluid, resembling molasses and water poured out, and in passing his hand in Dr. Thomas was able to seize a leg and delivered a child weighing nine pounds. It was the sixth case which Dr. Ward had seen operated on, and the next step of special interest pertained to the management of the placenta, which presented the appearance of a cup covering the entire anterior surface of the growth, and looking very much like the liver, both in color and contour, and giving very much the feel of the liver. It was attached to the ileo-pectineal line on the right side, extended upward under the diaphragm, and dipped down into the pelvis on the left side. The placenta was partially removed by tying it off in sections from its attachment to the pelvic rim, omentum, and intestines, and this was accomplished with comparatively a small amount of hemorrhage.

The question concerning the advisability of leaving the after-birth was raised. In some of the cases it had been allowed to remain and to discharge from the opening in the abdominal wall; but it was probable that such a mass, weighing several pounds, could not be discharged, and it was determined to remove a portion of it at least, if it could be detached from the intestines and omentum so as to avoid hemorrhage, as the part attached to the pelvic brim could be secured so as to avoid special danger from that source. The remaining portion of the placenta was sewed to the abdominal wound, and an open-

[1] The child continued to do well for two months after the operation, and was altogether in a very satisfactory condition, when during the heated term of the present summer it was seized with cholera infantum, dying of the disease in one week. No autopsy was obtainable.

ing left for drainage. Thus far the patient was doing well.

Dr. Lusk had a case, a short time ago, in which diagnosis was very puzzling. The patient came to him with a note from her physician, who said that she was unmistakably pregnant, but that all the symptoms had disappeared. Dr. Lusk found that there were no special symptoms of pregnancy, and the patient soon afterward left the hospital. She returned two months ago, when it was found that the tumor had increased in size. Dr. Lusk then introduced a needle and withdrew considerable pus. He then regarded the case as one of pyosalpinx, and proceeded to operate. After exposing the mass and tying off the omentum, he endeavored to detach the tumor, which was embedded in the pelvis and extended between the bladder and the rectum, and on lifting it up and working his fingers down by its side they passed directly into the rectum. He soon found that it would be impossible to enucleate the mass, and therefore cut into it, when he found a very marked thickening of the decidua, and inferred that it was a case of tubo-ovarian pregnancy, although he was unable to find any trace of the embryo. He then emptied the sac, stitched its walls and the peritoneal growth to the edges of the abdominal wound, and the patient did very well. The sac gradually closed, the wound had been reduced to small size, and the patient was sitting up in the ward.

The Society then adjourned.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, September 22, 1884.

David Webster, M.D., President *pro tem.*

CANDIDATES FOR MEMBERSHIP.

The *Comitia Minora* recommended for membership Drs. A. K. Hills and A. T. Hills, graduates of Homœopathic Medical Colleges. On motion the recommendation was referred back to the *Comitia* for further investigation.

NOMINATION OF OFFICERS.

The following nominations were made for officers for the ensuing year:

For President—Drs. Daniel Lewis, Henry B. Sands, D. B. St. John Roosa, and Andrew H. Smith.

For Vice-President—Drs. Frank P. Foster and Laurence Johnson.

For Secretary—Dr. Wesley M. Carpenter.

For Assistant Secretary—Dr. Charles H. Avery.

For Treasurer—Dr. Orlando B. Douglas.

For Censors—Drs. J. W. Howe, F. R. S. Drake, W. O. Moore, F. M. Weld, A. S. Hunter, H. E. Crampton, H. T. Peirce, J. H. Ripley, and W. R. Gillette.

Dr. A. Jacobi then read a paper on

INFECTIOUS DISEASES IN THE CHILDREN'S SERVICE OF BELLEVUE HOSPITAL,

and directed special attention to typhoid fever and diphtheria. It will appear in a subsequent number of The Record.

The paper was discussed by Drs. G. B. Fowler, C. H. Knight, M. B. Feeney, E. H. M. Sell, A. Seibert, and the discussion was closed by Dr. Jacobi.

Dr. R. Van Santvoord, Secretary, read a report from the Committee on Hygiene on

THE FREE BATHS OF THE CITY OF NEW YORK,

in which attention was directed to their usefulness and the urgent necessity for a greater number was pointed out.

The report was accepted and its recommendations adopted.

PROPOSED AMENDMENTS TO THE BY-LAWS.

Any member neglecting to pay dues and assessments for two years, shall forfeit his or her membership, provided he or she shall have received from the Treasurer one month's notice of his or her delinquency. Such member may be reinstated upon the recommendation of the *Comitia Minora* after the payment of his or her arrears.

Stated meetings shall be held on the fourth Monday of every month, except in the months of June, July, August, and October (annual meeting).

Dr. John L. Vandevoort was nominated for honorary membership.

ABUSE OF MEDICAL CHARITY.

The Secretary read a communication received from Dr. W. H. Donaldson, Secretary of the Bridgeport Medical Society and of the Fairfield County Medical Society, Connecticut, directing attention to the fact that many persons who were abundantly able to pay physicians' fees came from that locality to New York and obtained gratuitous medical advice at hospitals and dispensaries in the city of New York.

The communication was received and referred to a committe of three, Dr. A. Jacobi, Chairman, to be reported on at some future meeting.

The Society then adjourned.

Correspondence.

SOME OBJECTIONS TO THE USE OF PEPTONIZED MILK IN THE FEEDING OF INFANTS.

To the Editor of The Medical Record.

Sir: The importance of the subject of the artificial feeding of infants, and the difficulty of finding an efficient substitute for mother's milk may, I trust, prove sufficient excuse for my transgression on your valuable space. Since the publication of your editorial and the communication of Professor J. Lewis Smith in regard to the above subject, I have adopted the plan therein recommended for peptonizing milk, and I would ask correction on the following points: Casein, being an albuminoid, is largely acted upon in the stomach and absorbed directly from that viscus, and only those portions which *may* escape into the intestine are acted upon by the pancreatic secretion. It seems rational that the immediate coagulation of the casein in the stomach is to prevent its passage through the pylorus until acted upon by the pepsin of the gastric secretions in presence of an *acid*. By introducing an excess of alkali with the milk the gastric secretion is rendered inert (for the time being) and the milk does not coagulate, but passes on into contact with the secretions of the pancreas, small intestine, etc., where it is only *partially* converted into albuminose. Stomach digestion is, by this plan of management, practically "eliminated." The milk, instead of being retained for several hours, as it is in the stomach (normally), in direct contact with the gastric ferment, passes (too rapidly?) on through the intestine. In patients with "intestinal catarrh," fed on peptonized milk, some of the dejections consisted of two nearly distinct portions: a greater or less amount of mucus and a perfectly homogeneous mass of putty-like, partially digested casein. The quantity of food allowed was one fluid ounce every four hours; Fairchild's pancreatin was used, with Squibb's sodium bicarbonate, five grains of the former to fifteen grains of the latter, the details of the process as published having been carefully carried out. In cases in which vomiting is not troublesome, would it not be rational to confine digestion to the stomach, as far as possible, with the object of relieving the inflamed intestine? I am induced to make these crude suggestions in the hope that a "weighty word" may be elicited in reply. Very respectfully,

N. E. Oliver, M.D.

THE USE OF PEPTONIZED MILK FOR INFANTS.

To the Editor of The Medical Record.

Sir: There is a practical objection to the use of peptonized milk for infants in the manner that has been suggested by Dr. Smith and others. It consists in the fact that young infants have to be fed in the middle of the night. Now a sleepy mother, however affectionate, will not be disposed to get up at 2 A.M., prepare the milk, warm the water, and wait twenty minutes for the mixture to digest, while the infant *ad interim* howls, wakes up the male parent, and disturbs the household generally.

I would inquire whether a little pepsin containing the curdling ferment or a little gelatine will not do just as well. Also, whether the casein in condensed milk does not coagulate in fine flakes. Certainly I have found condensed milk to nourish children admirably, despite its sweetness. Yours, very truly, M. S.

Philadelphia, September 3, 1884.

THE NORTH CAROLINA CLIMATE FOR CONSUMPTIVES.

To the Editor of The Medical Record.

Sir: Physicians are sending consumptives from the Northern and New England States to California, Colorado, Texas, and Florida, when there is a more accessible and equally efficacious region much nearer. I refer to Western North Carolina, of which region Asheville, Buncombe County, is the metropolis, railroad centre, and great health resort for winter and summer. Fifteen years ago my father, Dr. H. P. Gatchell, Sr., wrote a pamphlet on this region, from which I get my facts regarding the climate. Asheville is 2,250 feet above tide-water; it is a place of five or six thousand inhabitants. It has six hotels and boarding-houses, capable of caring for twenty-five hundred guests. There is a club-house, a public library with free reading-room, and there are the usual churches and schools found in a place of this size. The climate of Asheville compares favorably with that of Geneva in Switzerland, Turin and Milan in Italy, and Vienne in the valley of the Rhone, East France.

	Spring. Temp. deg.	Summer. Temp. deg.	Autumn. Temp. deg.	Winter. Temp. deg.	Year. Temp. deg.
Geneva..	52.2	70.3	54.2	34.0	52.7
Turin....	53.7	71.5	53.8	33.5	53.1
Asheville.	54.3	71.3	55.3	37.8	55.3
Vienne ..	56.2	71.8	54.6	38.7	55.3
Milan ...	54.9	72.8	55.9	36.1	54.9

From the above table it may be seen that the winter climate of Asheville is milder than any of the places with which it is compared except Vienne. This place is enjoying a wide reputation as a resort for the cure of incipient phthisis. The writer has known of not a few complete recoveries, and many desperate cases which greatly improved. To show the immunity of this region from pulmonary disease, I append the following table. Out of every 1,000 deaths there are from consumption

In Northern New England (nearly).....	250
In Minnesota and California.....	150
In Kentucky and Tennessee (nearly)...	100
In Louisiana and Florida.....	50
In Western North Carolina.....	30

Dr. Cain, formerly of Charleston, S. C., says that not one of the many consumptives, in different stages of the disease, that he has sent to Asheville, has failed to improve; and he regards it as the most healthful country in the world.

The distinguished Professor Dickson, of Jefferson Medical College, stated that he and his family nowhere improved so much as in Asheville. He is "not aware of any spot, in Europe or America, so full of all that is desirable."

Dr. S. E. Chaillé, of New Orleans, who spent from three to five months in this region annually for four years, wrote that he had seen but one case of consumption, a mulattress, and not a native of this section The above is taken from an article by Dr. Chaillé, which may be found in the *Medical and Surgical Reporter* for April, 1878, p. 269; and in which he gives the results obtained at this place by Dr. W. Gleitzman in his *Sanitarium;* he stated that every incipient case of consumption was cured, or the disease arrested and the patient so much improved that it was safe to say that the improvement would go on to complete cure under the same conditions.

The scenery is grand and picturesque. On the Western North Carolina Railroad there are feats of engineering, and bits of scenery surpassing anything in the mountains of Pennsylvania, and equalled, perhaps, nowhere in the country.

The people are kind and hospitable, and life and property are as safe as in any section of the United States.

Edwin A. Gatchell, M.D.

Asheville, N. C.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from September 14 to September 20, 1884.

Caldwell, D. G., Major and Surgeon. Granted leave of absence for one month and twenty days, to commence about October 15, 1884. S. O. 95, Headquarters, Division of the Missouri, August 16, 1884.

Cronkhite, Henry M., Captain and Assistant Surgeon. From Department of the Platte to Department of the Missouri. S. O. 215, par. 1, A. G. O., September 13, 1884.

Taylor, Arthur W., First Lieutenant and Assistant Surgeon. From Department of the Missouri to Department of the Platte. S. O. 215, par. 1, A. G. O., September 13, 1884.

Wilson, William J., Captain and Assistant Surgeon. From Department of Dakota to Department of the East. S. O. 220, par. 1, A. G. O., September 19, 1884.

Gardiner, J. de B. W., Captain and Assistant Surgeon. From Department of Arizona to Department of the East. S. O. 220, par. 1, A. G. O., September 19, 1884.

Corbusier, William H., Captain and Assistant Surgeon. From Department of the East to Department of Arizona. S. O. 220, par. 1, A. G. O., September 19, 1884.

La Garde, L. A., Captain and Assistant Surgeon. From Department of Missouri to Department of Dakota. S. O. 220, par. 1, A. G. O., September 19, 1884.

Barrows, C. C., First Lieutenant and Assistant Surgeon. Granted one month's leave of absence, with permission to apply to the proper authority for an extension of one month. S. O. 86, par. 4, Headquarters Department of Arizona, September 13, 1884.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending September 20, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
September 13, 1884.....	1	44	30	6	30	29	0	0
September 20, 1884.....	0	33	17	4	17	27	0	0
Deaths.								
September 13, 1884.....	1	20	9	6	14	11	0	0
September 20, 1884.....	0	10	3	3	5	19	0	0

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Original Articles.

THE THREE TONSILS—SOME PRACTICAL SUGGESTIONS IN REGARD TO THEIR STRUCTURE, FUNCTION, AND DISEASES.[1]

By F. H. BOSWORTH, M.D.,

PROFESSOR OF DISEASES OF THE THROAT IN BELLEVUE HOSPITAL MEDICAL COLLEGE, NEW YORK.

I INVITE your attention this evening to a consideration of the three tonsils, in order that I may bring forward certain views in regard to them which I have for some time entertained, and which, while contrary, I think, to the generally accepted opinion, will, if true, serve to clear up much that is vague in the prevailing views as to the functions of these glands, and also to give a more practical direction to our therapeutical measures in the management of many of the commoner forms of disease in the fauces.

By the three tonsils it is to be understood that I refer to the two glandular masses found between the pillars of the fauces, and to which the name tonsil is usually applied, and to that mass of glands which is found in the vault of the pharynx, and which was first recognized and described by William Hunter,[2] and subsequently, and to a fuller extent, by Luschka,[3] and to which the name of Luschka's tonsil has been given, and also that of *the pharyngeal tonsil.* These three masses being so nearly identical in their structure, function, and diseases, I think that they may be properly designated as the three tonsils. The masses between the pillars of the fauces will be spoken of as the faucial tonsils, while that structure at the vault of the pharynx will be designated as the pharyngeal tonsil.

It has been the custom to describe the faucial tonsils as "two almond-shaped organs lying between the pillars of the fauces, and covered by a fibrous investing membrane or sheath, in which are from seven to twelve openings, which mark the orifices of a number of mucous glands, of which the organs are composed." There are, I think, several sources of error in this description. The faucial tonsil is not covered by a fibrous sheath. Underlying it there is a more or less dense connective-tissue layer, which is continuous with the submucous layer which underlies all mucous membranes. Beneath the mass this is thickened by the same morbid process which has developed the tonsil. Further than this there is no sheath to the gland. It is not an almond-shaped organ as a rule, but is of whatever shape the morbid process which has caused its growth may give it. The number of openings on its surface is entirely dependent upon the number of the glands which are involved in the hypertrophic processes which have produced it. It is not an organ of the body in the sense that the liver and spleen are organs, and which I think is a commonly accepted view, and therefore, in this sense, has no especial function to perform in the economy. In my work on "Diseases of the Throat," published three years ago, I subjected myself to criticism by the assertion that in the healthy throat there are virtually no tonsils. This opinion I still entertain. The "almond-shaped organ," etc., described by anatomists does not exist in a healthy throat, but is the result of a morbid process. This morbid process may have been of such limited extent as to have developed but a small tonsil, and one not sufficient to give rise to any other than trivial symptoms; or it may have gone to the extent of developing a mass of sufficient extent to cause serious disturbances. All mucous membranes are richly endowed with glands, in order that they may be kept in that soft and pliable condition which the proper performance of their functions demands. Perhaps no portion of the mucous tract demands a greater supply of mucus in the performance of its functions than the upper air-tract. In this region, therefore, we find these muciparous glands not only richly distributed throughout the membrane, but also aggregated in masses. This tendency to aggregation is especially noticeable in the pharyngeal vault, and between the pillars of the fauces. In a condition of health these aggregations of glands do not project prominently from the membrane, and hence, in a perfectly healthy state, their existence is not easily demonstrated by gross inspection.

The mucous membrane of the upper air-passages, however, perhaps more than any other portion of the body, is liable to be the seat of morbid action. It is a very noticeable clinical fact, also, that while in adults it is the mucous membrane proper which is most liable to be the seat of disease, in children it is the glandular structures which are especially susceptible; hence we find that morbid conditions of these glands, both in the fauces and in the pharyngeal vault, are of exceedingly frequent occurrence, especially in children.

The tendency of chronic inflammatory processes is to develop in hypertrophy. Hence we find a moderate hypertrophy of these glandular masses of exceedingly frequent occurrence in young people, constituting in the one case so-called enlarged faucial tonsils, and in the other an enlarged pharyngeal tonsil.

In order to make clearer my meaning, I will very briefly allude to the anatomy and functions of the upper air-tract. The nasal cavity proper extends from the nostrils in front to the posterior nares behind. They are lined by mucous membrane covered with columnar ciliated epithelia, whose ciliæ move in a direction from behind forward. These cavities fulfil a double function: they contain the distribution of the olfactory nerve and preside over the function of olfaction. With this we have nothing to do in the present consideration. The other function consists in guarding the entrance to the lungs, warming, moistening, and cleansing the inspired air. For the latter purpose the nasal mucous membrane is very richly supplied with glands which pour out an abundant sero-mucus, by which the inspired air becomes charged with moisture. The nasal cavities, then, belong purely to the air-tract. Behind the nasal chamber lies the pharynx. This is usually described as one cavity, extending from the basilar process of the occipital bone to the œsophagus. There is, I think, a source of error in this. That portion of the pharynx which lies above the border of the soft palate is lined with a mucous membrane covered with columnar ciliated epithelia, and very richly endowed with muciparous glands, those in the vault constituting the pharyngeal tonsil. Below the border of the soft palate the pharynx is lined with a mucous membrane, which is covered with pavement epithelia and very scantily supplied with glands. The characteristic anatomical feature of the air-passages is that they are lined with a mucous membrane covered by columnar

[1] Read before the New York Academy of Medicine, October 2, 1884.
[2] Cohen: Diseases of the Throat, second edition, p. 253.
[3] Der Schlundkopf der Menschen.

ciliated epithelia, and richly endowed with mucous glands; a form of mucous membrane which, while exceedingly delicate and sensitive, is eminently adapted to its function. It tolerates the passage of air, corrects its temperature, regulates its humidity, and prepares it for the lungs. At the same time it resents the impact of any foreign body, harsh substance, or the entrance of any irritating gas or vapor. It is also endowed with glands which secrete a more fluid mucus, more of the character of a sero-mucus.

On the other hand, the food-passage is lined with a mucous membrane which is covered with squamous epithelia. Its function is to allow the passage of masses of food of oftentimes firm consistence, but whose impact upon the membrane of the air-passage would not be tolerated. For this purpose the membrane is so constructed that it is hard, dense, and resisting, and not especially sensitive. It is richly endowed with glands which pour out a viscid mucus, whose function is as a lubricant mainly.

The pharynx, then, as it is usually described by anatomists, is really composed of two cavities differing materially in structure and function. The upper pharynx belongs to the air-tract, while the lower pharynx belongs to the food-tract. This view is still further sustained by the fact that an inflammatory process in the one region does not involve the other as a rule. A pharyngitis involving the lower pharynx is, I think, a very rare disease, and when met with, is not connected with any morbid condition of the upper pharynx, but rather with some disturbance of the food-tract, such as a gastritis, etc.

The lower pharynx, as before remarked, is very scantily supplied with glands, and yet in the performance of its functions it demands an abundant supply of mucus, in order that it may be kept sufficiently lubricated to allow of the easy passage of food in deglutition. Gland structures are exceedingly delicate, and liable to injury on exposure. The lower pharynx is perhaps the most exposed region of the mucus tract; it is therefore a hard, dense membrane with but few glands. In order to compensate for this deficiency it is surrounded on three sides with large aggregations of glands, one on either side between the pillars of the fauces, another immediately above in the vault of the pharynx, constituting in the one case the faucial tonsils, in the other the pharyngeal tonsil. The sole and only function of these masses of glands which constitute the three tonsils is, I believe, to supply mucus to moisten and lubricate the lower pharynx, and the design of Nature in so locating them has been most wise, for had the lower pharynx been endowed with glands sufficient for its demands, disease occurring in them would be attended with far graver consequences than attend morbid conditions of the gland arranged as we find them.

The minute anatomical structure of the faucial and pharyngeal tonsils have been so often described that further allusion to them need not be made. Their resemblance is so clear that the only difference in structure is easily accounted for by the fact that the pharyngeal tonsil is protected from any impact of foreign substances, and is therefore of a soft and spongy consistence, and contains connective tissue, less in amount and less firmly organized than the faucial tonsils, which are subjected to much harsher usage in the act of deglutition.

From a pathological point of view we find still further grounds for grouping the three tonsils together, for the same morbid processes which occur in the faucial tonsils are met with in the pharyngeal tonsil. These are: acute inflammation; chronic inflammation, resulting in hypertrophy; acute follicular inflammation; croupous inflammation, and diphtheritic inflammation.

Acute tonsillitis is a name generally given to quinsy. I shall endeavor to show later that quinsy is not a disease of the tonsil, but is an inflammation of the cellular tissue of the soft palate or neighboring parts, and that phlegmonous inflammation does not occur in the tonsil. As a matter of fact, therefore, the only form of acute inflammation met with in the tonsil is a catarrhal inflammation, viz., one attended with hyperæmia, swelling, and hypersecretion. This is usually described under the term subacute inflammation. In deference to common usage, therefore, I use the usual nomenclature.

Subacute tonsillitis.—This in the faucial tonsil consists of a mild form of inflammatory action characterized by swelling and hyperæmia of the glands, and is the result, generally, of exposure to cold. The constitutional disturbance is not great, there being, as a rule, a mere feeling of general malaise with chilly sensations. The tonsils are swollen to twice or three times their size in the quiescent state, and project into and encroach upon the isthmus of the fauces, two red, angry-looking masses. The palate may be involved in the hyperæmia, but there is no notable swelling beyond the tonsil proper. The attack is not of any serious import, and runs its course in from four to seven days. The predisposing cause is enlarged tonsils, and it occurs in children more frequently than in adults, simply for the reason that in children enlarged tonsils are most frequently met with. *Subacute tonsillitis* occurs in the pharyngeal tonsil with the same frequency as in the faucial tonsil; it is attended by the same constitutional symptoms, a mild febrile disturbance, and no more; and it is caused, as a rule, by exposure to cold. The main predisposing cause is an enlarged pharyngeal tonsil. It occurs most frequently in children, runs its course and subsides in the same way as the faucial disease. The only difference in the two affections is in the symptoms, which differ merely from the location of the morbid process. As far as I know, the affection has never been described under the above heading, although Meyer, in his original article on "Adenoid Vegetation in the Naso-pharyngeal Cavity,"[1] described their tendency to sudden attacks of turgescence, by which their size varied greatly at different examinations.

Löwenberg[2] and other writers allude also to the same symptom. It will be easily understood how, in the case of a mild inflammatory process occurring in the pharyngeal tonsil, the symptoms will be mainly nasal. There is apparently a cold in the head. The nasal passages are obstructed, the voice becomes affected, changing to what Meyer calls the dead voice, its nasal resonance is destroyed, and there is more or less discharge of mucus or muco-pus into the fauces. The attack is what is usually regarded as a cold in the head, and is often called an acute coryza. This, I think, is a frequent error. An acute inflammation of the nasal mucous membrane in children is very rare. As before remarked, the glandular structures are the parts generally attacked in children and not the mucous membrane proper, and their colds, if in the throat, are in the faucial tonsils, and if in the nasal passages, are in the pharyngeal tonsil rather than in the nasal membrane. The attack subsides in a few days, as in the faucial disorder, its frequent recurrence, however, should call attention to the probable existence of the chronic disorder which is in most cases the predisposing cause of the attack.

Acute follicular tonsillitis.—The epidemic of this disease, which prevailed to such a great extent last spring, and indeed which has prevailed so extensively in the past three or four years, has served to bring it prominently to the attention of all of us. It consists of an inflammatory process, involving one or both tonsils, which is characterized by the exudation into the crypts of the glands of a fibrinous material which fills and distends their cavities. The onset of the attack is marked by a chill, followed by general febrile disturbance of a marked character. The skin becomes hot and flushed, there are headache, pains in the bones, loss of appetite, and all the evidences of a febrile movement far greater

[1] Medico-Chirurgical Transactions, vol. liii. London, 1870.
[2] Les Tumeurs Adénoïdes du pharynx nasal.

than can be accounted for by the amount of local inflammatory action.

In a paper, read at the meeting of the American Laryngological Association in May last, on "The Clinical Significance of Fibrinous Exudations,"[1] I took the ground that this disease is an essential fever with a local manifestation in the throat, something in the nature of one of the exanthemata. I think there is much ground for regarding this as the correct view. In the same paper I called attention to the fact that the same disease occurred frequently in the pharyngeal tonsil. In each case the onset and progress of the disease is characterized by the same symptoms, the only difference being in the locality of the eruption, and in the subjective symptoms with reference to pain in deglutition, etc.

Croupous tonsillitis.—During the prevalence of follicular tonsillitis we meet frequently with cases in which the attack is marked by the same group of local and constitutional symptoms, with the exception that an inspection of the fauces reveals, in place of the small pearly white spots on the tonsil, a broad membrane covering more or less the whole face of the gland. This I regard as the same disease as the former, with an eruption which is more marked or efflorescent. The exudation which in the former case confines itself to the crypts of the glands, in the latter fills and overflows them, forming a continuous membrane. If this be detached from the surface, there will be found beneath it the appearances of the follicular disease.

The same membrane I have frequently observed on the pharyngeal tonsil, and its appearance is attended with the same general symptoms as in the faucial disease.

Diphtheritic tonsillitis.—A diphtheritic membrane on the faucial or pharyngeal tonsil occurs in connection with the blood-poison of diphtheria. Wherever it may be developed, its clinical significance is the same.

Hypertrophied tonsils.—Hypertrophy of the faucial tonsils gives rise to a train of symptoms which are mainly due to the mechanical presence of these glandular masses in the fauces. They occur mostly in young people. Their development is attended by the occurrence of repeated attacks of subacute inflammation or ordinary catarrhal sore throat, and they show a tendency to subside at puberty. Their development also is the result of a purely local morbid process, and is not, as a rule, the outcropping of any of the constitutional dyscrasiæ. If there is any impairment of health, it is to be accounted for by the mechanical action of the growths, in obstructing respiration, disturbing sleep, or otherwise interfering with the natural functions.

Hypertrophy of the pharyngeal tonsil has been described by many writers under the heading usually of adenoid tumors, or vegetations at the vault of the pharynx. It seems to me that a clearer comprehension of this affection would be reached by showing its relation with enlarged faucial tonsils. This form of hypertrophy, like that in the faucial tonsil, occurs mostly in young people: it gives rise to a train of symptoms which are largely mechanical; its development is attended by repeated attacks of subacute inflammation; it is a purely local trouble; it shows a tendency to subside with the attainment of puberty, and in fact in all its aspects is identical with the faucial disorder, except in its location.

In this view, then, enlarged tonsils in either region are simply masses of diseased glands, whose function has in the main been abolished or perverted by the morbid process which has fixed itself upon them. If the hypertrophic process is limited and the tonsils are of small size, giving rise to no untoward symptoms, either by their mechanical interference with function, or by exciting an abnormal discharge from the parts, they require no treatment. If, on the other hand, the hypertrophy has gone to the extent of developing a glandular mass, which by its presence interferes with the function of the parts, or which in any way gives rise to serious symptoms, it seems to me that there should be no question as to the proper remedy. They are diseased structures and should be extirpated. This rule, I think, should apply whether we have to deal with an exceptionally large mass, or with a single follicle not larger than a split pea. As regards any local medication I believe it to be absolutely inert in reducing genuinely hypertrophied glands. It is sometimes said that Nature placed these tonsils in the throat, and that they should not be removed. Nature certainly never put them there.

Perhaps one of the most remarkable suggestions ever made in regard to the tonsils was that of Penrose, that their removal might result in a loss of virile power. This strange suggestion has been so completely answered by Daly,[1] that I only allude to it as a curiosity. It is sometimes suggested that a portion of the tonsil might be removed, but not all. I see no more reason for this than for the removal of only a portion of any other morbid growth, a fibroid for instance. The danger of hemorrhage after tonsillotomy has often been urged as an objection to the procedure. This danger is, I believe, overestimated. Literature records no fatal case, as far as I know, with the exception of those cases in which the carotid artery was cut. I cannot conceive of an intelligent operator making this blunder. Furthermore, it should be stated, hemorrhage never occurs in the operation upon children. The nutrient artery of the tonsil in young people is small and its walls collapse easily. In adults, on the other hand, hemorrhage after tonsillotomy is almost the rule. This is often exceedingly troublesome. I have never seen a case, however, in which the bleeding was not promptly arrested by the application of a wire heated to a dull, red heat. This is a simple procedure and should be resorted to always in preference to the ordinary styptics, which are useless in controlling arterial hemorrhage, and the only troublesome bleeding which occurs in these cases is from the nutrient artery.

As regards the removal of the pharyngeal tonsil I have nothing to say in addition to what I have already given before the Academy[2] two years ago.

Quinsy.—I have already alluded to quinsy as a disease of the cellular tissue of the fauces rather than of the tonsil. Phlegmonous or suppurative disease does not occur in glandular structures, but belongs rather to areolar tissue. It is true that we occasionally meet with small abscesses in the glands of the tonsils or in other portions of the mucous membranes of the air-passages, but they are small abscesses, as a rule, which result from the occlusion of a gland, and are not phlegmonous in character. For three years I have entertained the view that quinsy was not a disease of the tonsil, and in that time have carefully watched and examined the cases which have come under my observation, and I do not recall a single instance in which I have not been able to demonstrate conclusively to my students, or others who have been present at my clinic, that the tonsil was not involved directly in the inflammatory process. The tonsil oftentimes presents a red and angry appearance, but this is always secondary, and due to the fact of its nearness to the phlegmon. Again, the tonsil is occasionally very prominent, being lifted from its bed, and at times projecting far toward the opposite side of the fauces. This is due to the phlegmon occurring behind it. The disease I believe to be an acute cellulitis of the areolar tissue of the fauces. In the very large majority of cases it occurs in the soft palate; in others it occurs in one or the other of the pillars of the fauces; and in still rarer instances, in the pharyngeal wall. Furthermore, the cause of quinsy I believe to be in very many cases the rheumatic habit. This view is an old one, and has been maintained by many writers on the subject. I had not paid any close attention to this view until Dr. Fowler[3] called renewed

[1] New York Medical Journal, May 12, 1884.

[1] Medical and Surgical Reporter, December 15, 1883.
[2] Growths in the Nasal Passages, MEDICAL RECORD, January 13, 1883.
[3] London Lancet, December 11, 1880.

attention to the connection between rheumatism and quinsy, and reported a number of cases which supported the view. Dr. Fowler also suggested the value of the salicylates in the treatment of the disease.

For three years I have treated all my cases of quinsy as cases of phlegmonous inflammation of the submucous cellular tissues, and as probably due to the rheumatic habit. The following summary is offered as affording some points of interest: The whole number of cases seen has been 133. Males, 88; females, 45. Under ten years, 3; ten to twenty years, 30; twenty to thirty years, 61; thirty to forty years, 11; over forty years, 12. The oldest case was sixty-nine years, the youngest nine months. This latter case was a female child which I saw the fourth day of the attack. The case had gone to suppuration and I opened the abscess in the soft palate.

In the 133 cases the phlegmon was in the soft palate in 115 cases; in one or the other of the posterior pillars of the fauces in 11 cases; beneath the tonsil in 2 cases, and in the wall of the pharynx in 2 cases. These latter two cases would have been called perhaps retro-pharyngeal abscesses. They were unquestionably quinsy. In many cases there was the clinical history of attacks of rheumatism, either arthritic or muscular. Unfortunately my notes give no accurate information as to the proportion of these cases, but I think it was fully sixty per cent.

If the effect of remedies is to be regarded as any evidence, the connection between the two diseases is still further evidenced by the fact that so large a number of cases of quinsy were aborted by the early administration of the salicylates. These cases were mostly seen at my clinic at the out-door department of Bellevue Hospital. Many of them came several days after the onset of the attack. Of those whom I saw within the first thirty-six hours, the attack was aborted by the administration of the salicylates in a majority of cases. In those cases in which the attack was not aborted, suppuration seemed to be very much hastened. The form in which the remedy was administered was as follows:

℞. Sodæ salicylatis..... ʒ iij.
Aquæ..... ʒ vj.
M. Sig.—One tablespoonful every two hours.

Last spring Dr. Barker suggested to me the value of bicarbonate of soda locally applied. The soda is to be taken up on the moistened finger and plastered over the inflamed surface every ten or fifteen minutes. I have since then made use of this remedy in connection with the salicylates, and in one or two cases its action has been most gratifying. I am not prepared, however, to abandon the use of salicylates in favor of the soda. In several cases also in which the quinsy habit has existed I have given the above prescription, with directions to commence its use immediately upon experiencing any symptoms of these attacks. These were cases in private practice. In no one of these cases has there been an attack of the disease. If the attack is not aborted by medication, it seems to me that it is of importance to us to recognize and treat the disease, as far as the local process is concerned, as an abscess in any other portion of the body. In other words, to treat it on general surgical principles. I think that the importance of introducing the finger into the fauces is not sufficiently recognized. No case—no case of quinsy, certainly—should ever be treated without it. By introducing the finger into the fauces, the condition and location of the phlegmon can be determined, and the occurrence of suppuration and the proper point at which to introduce a bistoury recognized. In this manner the treatment of a quinsy becomes a very simple matter, and does away with the use of gargles, inhalations, sprays, fomentations, etc., which oftentimes add to the discomfort of the patient rather than to his relief.

In conclusion, I have only to say that if I have brought forward any suggestions which are at variance with old established teaching, they are offered very modestly, but still as convictions which have been the result of a somewhat large experience. In acting upon them I am confident that I have obtained better results in the treatment of throat diseases than in following the older doctors.

TWO CASES OF NEURECTOMY FOR THE RELIEF OF FACIAL NEURALGIA.

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The two following cases are deemed by me of sufficient importance to warrant their publication, inasmuch as they illustrate the two most common forms of neuralgia of the face and the complete relief afforded, in otherwise most intractable cases, by the resources of operative surgical art.

Case I.—Mrs. M. L—— applied to me in January, 1883, for the relief of a most violent and prolonged neuralgia, referred to the area of distribution of the frontal division of the ophthalmic or first portion of the fifth nerve. She had suffered more or less for several years with milder attacks in the same region, but the present attack had proven so severe and persistent, despite every therapeutical measure, that in sheer desperation she consented to submit to any plan of treatment which held out the slightest hope of relief. When she came under my care she had not had the slightest remission of the pain for full three weeks. Even opiates, unless pushed to the point of dangerous narcosis, failed to mitigate the pain. The conjunctiva upon the affected side was injected, ptosis was marked, and the lachrymal secretion flowed copiously upon attempts being made to raise the eyelid. There was intense tenderness over the point of emergence of the supra-orbital nerve from the foramen.

On February 4, 1884, I operated by Lienhart's method as follows: An incision was made along the upper margin of the left orbit, and in a direction parallel to the same directly down to the bone. The tarsal cartilage was separated upon a director. The supra-orbital nerve now came into sight, and by keeping the levator palpebrar, as well as the other contents of the orbit wall, depressed by a spatula, was traced back to the point where both it and the supra-trochlear branch are given off from the frontal nerve; beyond which point, after separating the trunk from its accompanying artery, it was severed. By means of a pair of stout scissors the fibrous bridge which binds down the nerve as it approaches the foramen was broken down, the nerve drawn out, and by retracting the upper lip of the horizontal incision, branches of the nerve distributed to the forehead were traced and dissected out. The supra-trochlear branch was divided at the point where it comes upward toward the pulley of the superior oblique muscle. The wound was irrigated with Koch's solution (mercuric bichloride, 1 to 1,000), its edges approximated by horse-hair sutures, and a naphthalinated cotton dressing applied.

The after-history of this case is entirely uneventful. The wound pursued an aseptic course, occupying less than a week in healing, and the neuralgia disappeared at once. Up to the present time, six months after the operation, there has been no return of the trouble, and a cure may confidently be asserted as having been accomplished.

Case II.—A. V——, aged fifty-three, German. This patient applied to me in March, 1884, for relief. His neuralgia was of the variety known as *tic douloureux*, and was of three months' standing; for the last six weeks of this time he had been deprived almost entirely of sleep, suffering all the while the most intense and agonizing torture. He had been treated by a number of physicians, and all the usual remedies had been prescribed for him, without, however, affording him any relief. The pain extended through the branches of the second division of the fifth nerve, upon the left side; hyperæsthesia of the

whole surface of affected area existed, as well as a most exquisite sensitiveness of the gum and teeth of the upper jaw of that side. The slightest touch of the integument or an attempt at taking food brought on a paroxysm of increased pain, with twitching of the left facial muscles. The pain was more or less constant during the intervals of freedom from twitching, but when the pain and "tic" were conjoined the agony was painful to witness.

On March 20, 1884, I performed the following modification of the operation first devised and practised by Carnochan, of New York: Ether having been administered, a curvilinear incision was made parallel to and slightly below the inferior orbital margin, from the inner to the outer angle of the eye. This was carried directly down to the bone and the flap dissected upward until the edge of the infra-orbital ridge was reached. The leash of nerves constituting the branches of the infra-orbital after it leaves the foramen was now dissected from the under surface of this flap. The tissues covering the anterior surface of the superior maxillary bone were next detached and drawn downward by a retractor and there held by an assistant. A trephine five-eighths of an inch in diameter was now applied in such a way that its point punctured the antrum of Highmore upon a vertical line running directly downward from the infra-orbital foramen, while its rim or cutting edge slightly overlapped the foramen itself. By following this rule in the application of the trephine, it was found that all of the available space possible was gained for operating. The removal of a button of bone from the anterior wall of the antrum having been accomplished, the patient was lifted from the operating table to a chair and placed in a sitting position with his back to a window; a reflecting mirror upon my forehead furnished the necessary light for the performance of the rest of the operation. The posterior wall of the antrum was now perforated by a trephine half an inch in diameter. In using this latter the centre-pin was withdrawn prior to its application, the converging surfaces of the cavity being found sufficient to support the instrument, and the danger of unwittingly thrusting the pin into the spheno-maxillary fossa avoided.

Upon perforating the posterior wall of the antrum, the spheno-maxillary fossa, together with its contents, was brought into view. With a small chisel the infra-orbital canal was opened and broken down so as to release the nerve and its accompanying artery, and tracing the nerve rapidly back to the point where it enters the orbit, with a pair of small double-curved scissors section of the trunk of the superior maxillary nerve was made beyond the point where it joins the ganglion of Meckel. The orbital, spheno-palatine, and inferior dental branches being divided, the ganglion and nerve-trunk were together drawn out. A smart hemorrhage from that portion of the internal maxillary artery contained in the spheno-maxillary fossa now occurred, but it was readily controlled by a small piece of compressed sponge attached to a stout thread and crowded into the fossa. This latter was left in position in order to guard against the bleeding. The parts were irrigated with Koch's solution, the external wound drawn together by a few horse-hair sutures, an opening being left at the most dependent angle for drainage, as well as to facilitate the withdrawal of the compressed sponge, and a dressing of naphthalinated cotton applied.

The next day the sponge was removed. Daily irrigations with Koch's solution and dressing with naphthalinated cotton were practised. The wound healed slowly, owing to the impracticability of keeping it in an aseptic condition, and a month elapsed before it had entirely closed. For the first few hours after the operation the patient complained of wandering pains over the whole left side of the face, but the "tic" had disappeared entirely, and in twenty-four hours he expressed himself as being perfectly free from pain; this improvement continued, and no recurrence of the pain took place. A slight depression exists at the site of removal of the button of bone.

Remarks.—Fortunately, as a matter of clinical experience, intractable and persistent facial neuralgia requiring operative measures for its relief is comparatively rare. It is a matter of congratulation, likewise, that it occurs, in the vast majority of cases, in nerves purely sensory, admitting of neurotomy or neurectomy without destruction of important functions. There can be no question as to the propriety of operating in these desperate cases, for a sufficiently large number are on record in which relief has been afforded to attest the value of the proceeding. In the choice of operation preference should always be given to neurectomy rather than to neurotomy, for the reason that experience proves that almost invariably the pain returns after the latter procedure, and even in some instances has been aggravated after a lapse of time, owing probably to the nerve becoming involved in the cicatrix at the site of operation. On the other hand, neurectomy gives a relief more or less decided and lasting.

As to the origin of these severe forms of neuralgia of the facial nerves, I can offer but little; nor can it be said that a positive opinion can be advanced in a given case as to whether the neuralgia is of central or peripheral origin. Fortunately, however, either variety is benefited, though not equally so, by neurectomy. In the central variety, there can be no doubt that the paroxysms of severe pain are induced by the application of stimuli to the periphery, and that a removal of the nerve-trunk and its branches as far as practicable destroys the medium by means of which these stimuli are conducted centripetally. The suspension of the excitability of the nerve-centre, even though temporarily, is of benefit by fulfilling the first indication in the treatment, namely, rest and freedom from irritation. Further, the reflected or irradiated pains, of themselves sources of much suffering, are relieved by quieting the central excitability.

Where the neuralgia is indubitably of peripheral origin, as for instance in those cases where a portion of a nerve-trunk or its branches are involved in a cicatrix, or a neuroma has developed upon the same, a cure may be confidently promised if neurectomy be resorted to. Here removal of the nerve-trunk as far away from the original point of irritation as is practicable is advised. Every effort should be made to promote rapid healing after operation, for the reason that the greater the amount of connective-tissue proliferation and formation of cicatricial tissue about the nerve-stump, the greater the chance of the developing therein of nerve-fibres, these communicating with or springing from the nerve-stump, and subsequently dragging upon the latter and becoming a renewed source of irritation. The antiseptic method of operating is, therefore, to be commended as being most likely to accomplish the best possible results.

Physio-Medicalism.—A correspondent asks for information regarding "physio-medical" colleges and practitioners. So far as we can learn, physio medicalism is an "ism" which flourishes only in Ohio and Indiana. There have been in Cincinnati a Physio-Medical College and a Physio-Eclectic Medical College, both of which institutions, like the good, died young. There is now in Cincinnati The Physio-Medical Institute, which has been in existence since 1877, and which graduates a dozen students every year. Its catalogue requirements are as high as those of most regular colleges, but it graduates a higher per cent. of students upon matriculants than the average. There is also a Physio-Medical College in Indianapolis, Ind., which was also founded in 1877, and which also graduates a very high per cent. of students. What the peculiar tenets of physio-medicalism are we do not know. There cannot be many over a hundred legitimate graduates in this specialty, and its existence is of small importance. The extinct institutions were probably merely advertising dodges for a few quacks.

LAPAROMYOMOTOMY.

Report of Two Cases Successfully Treated in a General Hospital.

By LEWIS A. STIMSON, M.D.,

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I OFFER the following brief history of two cases of successful removal of the uterus and ovaries by abdominal section as a contribution to a subject which is now receiving much attention. A point of special interest is the fact that both were treated in the common ward of a general hospital. Each was a case of multiple fibromata of the uterus.

The antiseptic precautions consisted in thorough disinfection by the bichloride of mercury of the hands of the surgeons, of all sponges and cloths, and of the wound of the abdominal parieties by irrigation. The instruments were kept in a strong solution of carbolic acid, and the sponges that were introduced into the abdominal cavity were first purified by immersion in the bichloride solution and kept during the operation in a hot solution of carbolic acid. The pedicle was secured by transfixion and ligation with india-rubber cord, and treated by the extra-peritoneal method. The ligatures came away on the tenth and seventeenth days respectively. The external wound was kept covered with iodoform and dressings of borated cotton and iodoform or carbolized gauze. In each case the final cicatrization of the wound was slow.

In the first case, the stump of the uterus promptly sank back to its original position; in the second, it remained for several weeks drawn high up and firmly adherent to the anterior abdominal wall. At no time did the symptoms in either case cause more anxiety than that which would be naturally associated with the operation. In both cases I was greatly aided by the advice and assistance of my friend and colleague Professor Wm. M. Polk.

CASE I.—Effie V——, colored, about thirty years of age, was sent to me for treatment from Bedminster, N. J. I admitted her to the Presbyterian Hospital early in May, 1884.

She bore a child ten years ago. For the eighteen months preceding her admission to the hospital she had been troubled by an abdominal tumor, which caused much pain, entirely prevented her from working, and was accompanied by profuse menorrhagia. Her courses were very profuse.

There was a hard, irregular tumor within the abdominal cavity, extending from a little to the right of the median line in the hypogastrium upward and to the left to a point above the level of the umbilicus, and protruding into the vagina so as to force the uterus upward and backward almost beyond the reach of the finger. The tumor was slightly movable at first, and changed its position downward and to the right and became more movable while the patient was under observation. The cavity of the uterus was four and one-half inches long. The diagnosis was "pedunculated fibroid of the anterior wall of the uterus, with enlargement of the uterus by intra-mural fibroids."

May 24th.—Operation. The surface of the abdomen was washed with soap and water and then with the bichloride solution, the limbs and upper portion of the trunk wrapped in blankets, and the lower portion of the trunk wrapped in a rubber sheet in which an oval hole had been cut at the part corresponding to the field of operation. Over this sheet were placed cloths wet with the bichloride solution. An incision was made in the median line from a point a little below the umbilicus to the pubes, and all bleeding arrested before the peritoneum was divided. After division of the peritoneum the hand was introduced into the cavity, and with some difficulty the pedunculated tumor, which had a long pedicle, was turned out. The left ovary was found to lie at some distance from the uterus, and a double silk ligature was passed through the broad ligament below the pampiniform plexus by means of an ivory pin, and tied on each side of the ovary; the latter was then cut off. The right ovary lay close against the uterus, and as it was thought it could not be separately removed without risk of hemorrhage, and as the uterus was found to be studded with tumors, the latter was drawn forcibly upward, and its neck, which was long and free, was transfixed from before backward with the ivory pin, and a double india-rubber cord four millimetres in diameter drawn through and tied around each half. On the left side the rubber ligature passed just below the ligature that had been placed under the ovary; on the right side it passed outside the ovary and embraced the entire thickness of the broad ligament. Each ligature was drawn very tight and secured by tying it in a single knot and fastening the ends together close to the knot by a loop of silk. The uterus was then cut off and the stump brought to the lower angle of the abdominal wound and transfixed with two long pins close to the ligatures in the distal side. Very little bleeding took place from the punctures made in transfixion, and a sponge passed into Douglas' cul-de-sac brought out only a small clot of blood.

The peritoneum, the aponeurotic-muscular layer, and the skin were each united with a continuous catgut suture, and three silver wire and button sutures, not including the entire thickness of the wall, applied to bear the strain. A decalcified bone drain was placed in the parietal wound between the skin and peritoneum, extending from the upper angle of the wound to the stump. Iodoform, gauze, body-bandage.

The pedunculated tumor was flattened, and its pedicle ran from the centre of the flattened surface; it measured four by six inches across the top, and three inches from the pedicle to the upper surface; the pedicle was two inches long, one and a half inch wide, and one-fourth inch thick when compressed between the fingers. The uterus was irregular in form, with one small (one inch) pedunculated fibroid and many intra-mural ones; it measured four inches across the fundus, and the length of the portion removed was the same.

May 25th.—Temperature, 100⅘°. Slight abdominal pain. Ordered morphine, and an ice-water coil on each side of the abdomen. The wound had oozed freely, but was then dry. In order to make the application of the ice-water coil more efficient, the gauze dressings were removed, and a compress kept wet with the bichloride solution substituted.

May 26th.—Temperature, 100¼°.

May 27th.—Removed drainage-tube and button sutures.

May 29th.—Temperature, 98⅘°. Discontinued coil.

June 2d.—Removed the rubber ligatures, which were lying loose, and the slough of the stump. This left a good-sized suppurating cavity, at the bottom of which was an opening into which a probe passed easily to the depth of two inches below the surface of the skin. It was apparently formed by the sinking of the stump after it had become adherent to the peritoneum lining of the anterior abdominal wall. Dressed the wound with iodoform and dry absorbent cotton, the latter to be frequently changed.

June 9th.—The cavity is slowly filling, but the pouch at the bottom remains unchanged, except that its orifice is smaller; it is about one inch deep and one-third inch in diameter.

June 16th.—Wound is slowly contracting; pouch still one inch deep.

June 23d.—Pouch no longer recognizable; wound nearly flat.

July 1st.—Patient sits up; the neck of the uterus can be readily felt high in the vagina.

July 12th.—Wound entirely healed. Discharged.

CASE II.—Mrs. F——, forty years of age, entered the Presbyterian Hospital June 17, 1884. She had been suffering for eight and a half months with a tumor in the

lower part of the abdomen, profuse menorrhagia, and pain. For four months of this time she had continuous pain and fever, and she still suffers so much that, although fully aware of the risks of an operation, she desires to undergo it in the hope of relief. The tumor occupies the lower portion of the abdominal cavity, extending up to the umbilicus, is hard, irregular, and movable, and projects into the vagina, crowding the uterus so far back and upward that the os can barely be reached with the finger.

Diagnosis.—Intra-mural fibroids, probably with extensive adhesions.

July 8th.—Operation. This was conducted as in the preceding case. The uterus was found studded with intra-mural and sub-peritoneal fibroids, and the peritoneum covering it doubled by a soft, very vascular layer adherent to the rectum in bands. The right ovary was free and quite distant from the uterus; the left ovary was quite closely attached to the sigmoid flexure, and its tube was adherent to the rectum and sacral wall and dilated to one inch in diameter. The adhesions to the rectum were divided between double catgut ligatures, and the ovaries freed by transfixing and cutting between double silk ligatures. In the anterior wall of the uterus, low down, was a large globular fibroid, over the lower portion of which the bladder was broadly spread out. I made a transverse cut through the peritoneum above the reflection of the bladder, stripped the latter away from the uterus with the finger, passed a double rubber cord through the cervix and included fibroid tissue, and tied it. As it seemed inadequate properly to constrict the tissues embraced in its loop, I passed a second larger cord through the same puncture and tied with both, then cut away the bulk of the mass and enucleated from the stump the remaining fibroids and portions of fibroids. The parietal ligature beyond the left ovary meanwhile had slipped and some bleeding followed, which was arrested by passing an armed needle through the mass of divided vessels close to the sigmoid flexure and tying on both sides. The oozing in the pouch made by stripping up the bladder was quite free, and was finally arrested by the actual cautery; this pouch was drained by a rubber tube, its surface dusted with iodoform, and its mouth closed in great part by stitching the peritoneum together. The stump was brought to the lower portion of the wound and transfixed with four long pins. The peritoneal portion of the abdominal wound was closed by a continuous catgut suture, the musculo-aponeurotic layer by interrupted catgut sutures, and the skin by interrupted catgut and two silver sutures. A long decalcified bone drainage-tube was passed into Douglas' cul-de-sac, and the incision and stump dusted with iodoform and dressed with iodoform gauze, borated cotton, and a body-bandage. Morphine ordered.

July 9th.—Temperature rose gradually to 102° in the morning, and sank to 100⅘° in the afternoon. Changed dressing and removed the bone drainage-tube. The deeper layers of the dressing were saturated with a dark, thin discharge. Irrigation coil applied on each side.

July 10th.—Temperature, 100⅘°. Occasional pain, otherwise comfortable.

July 11th.—Much nausea; removed one inch of the rubber drainage-tube; dressing dry except for a small stain over the tube; temperature, 99° to 101°; morphine discontinued.

July 12th.—Temperature has remained below 100°; the only complaint is of the nausea and of pain caused by vomiting.

July 15th.—Changed dressing and removed the tube; temperature still below 100°; some little nausea.

July 16th.—Pressure caused about two ounces of pus to flow out beside the stump and from the upper angle of the wound.

July 24th.—Stump came away this morning; the ligatures had not cut through, but remained fast on the portion that sloughed off, the slough extending about a quarter of an inch beyond them. The cavity is an inch deep and its bottom flat and solid; the adjoining skin has turned inward, especially on the left side, and united with the surface of the wound.

July 26th.—After a severe fit of vomiting this morning free bleeding took place from the deeper part of the wound; it was arrested by lightly touching the bleeding point with the cautery.

August 14th.—The patient has been doing very well, except for occasional nausea. The wound is deeply retracted; the skin on the left side extends to the bottom; on the other side is a flat granulating surface about one and a half inch long and a quarter of an inch wide.

I failed to touch the cervix in vaginal examination. The abdominal wall at the wound is not movable upon the underlying parts; some tenderness on pressure on each side above the wound; told to sit up.

August 29th.—The wound has become level with the surface of the abdomen by the rising of the retracted skin, and is cicatrized at its centre. The cervix is lower and can now be readily felt in the vagina.

At intervals of about a week the patient has had attacks of nausea and pain in the lower part of the abdomen, which have always ceased after a free evacuation of the bowels has been obtained by enema.

September 11th.—Patient left hospital well and "feeling better than in years." There has been no recurrence of the nausea and pain in the abdomen since the latter part of August.

I chose the extra-peritoneal method of treating the pedicle because I deemed the consequent delay in the final healing of the external wound of no importance when compared with the security which the method gives against complications arising from retention of pus or decomposition of the portion of the pedicle embraced in the ligature. It may be that the first of these two cases would have done as well if the pedicle had been allowed to drop back into the abdominal cavity, but it could hardly have done any better. By the ninth day the ligatures had fallen, the abdominal cavity was closed, and there remained only the granulating wound of the anterior abdominal wall, and this soon cicatrized. With intra-peritoneal treatment of the pedicle the healing of the external wound may be equally delayed, and even when this healing takes place most promptly the patient gains but little in time or in security, for the risks or discomforts arising from the small unhealed surface are trifling, and a due regard for the safety of the internal cicatrices would compel an equally prolonged confinement to the bed even if the external wound were healed.

In the second case I am convinced that the intra-peritoneal method would have placed the patient's life in extreme peril. The cervix was itself occupied by tumors, and through two of these the ligature had to be passed. Separation took place, not in the plane constricted by the ligature, but at a little distance on its proximal side, apparently at the limit of the transfixed tumors, and when the ligatures came away (on the seventeenth day) they still firmly held the slough. It is extremely improbable that such an occurrence could have taken place within the abdominal cavity without provoking suppuration, and for the pus so formed there would have been no outlet except such as might have spontaneously formed. The formation and retention of that pus and the possible decomposition of the slough would have been most dangerous complications.

The only serious objection to the extra-peritoneal method which I foresaw was the possible interference of the pedicle with the subsequent distention of the bladder. I expected that the cervix would remain attached to the anterior abdominal wall closely enough to compress the bladder against the pubes and allow of its dilatation only on each side. This anticipation was not realized. In neither case did the patient find it difficult to retain her urine for the usual length of time, and in each the

cervix sank back (promptly in the first case, much later in the second) to its former place in the pelvis. Apparently this was accomplished by the stretching or sliding of the peritoneum after adhesion had taken place between its confronted surfaces; and in the first case, in which it was found to have occurred when the ligatures fell, a deep pouch like a glove-finger was formed and easily demonstrated at the bottom of the wound. The effect of this occurrence is to place the parts in what is practically the same condition as that in which they are left by the intra-peritoneal method of treating the stump, and thus to restrict the differences between the two methods to those existing during the process of repair of the wound. Those differences appear to make the extra-peritoneal method much the safer, for in it there is no possibility of the inclusion of a decomposing slough or of the retention of pus that has formed about the ligature, and if hemorrhage occurs through the slipping of the ligature, as has occasionally happened and with fatal results, it is at once detected and is accessible to treatment.

ANTISEPTIC MIDWIFERY.

By A. C. PAGE, M.D.,

TRURO, N. S.

MR. PRESIDENT: The object of this writing is to introduce the question of[1] "Antiseptic Midwifery," hoping in this way to obtain the experiences of wiser and abler men, so that while I am being taught, our younger brethren may catch some useful hints to help them over hard places. At the February meeting of the Colchester County Medical Association, Dr. I. W. McDonald, of Londonderry Iron Mines, was kind enough to give an object-lesson, illustrating the materials used and the manner of applying antiseptic dressings in surgery.

In the discussion that followed, Dr. Neil Sutherland, of Spring Hill Mines, called attention to the importance of antiseptics in midwifery practice, and Dr. McLeod, of Economy, related a case where, for want of such attention, he was caused great inconvenience and anxiety, he having, as he supposed, carried septic germs to his patient from a suppurating wound he had just previously been dressing, with nearly fatal consequences. I have been in the habit, from the beginning of my practice, twenty-eight years ago, of washing out the vagina with Labarraque's solution in all cases where the discharges after confinement were offensive, and my attention was called to it; but in many of my cases I never saw my patient more than once after delivery, and many not even once. Of late, however, the journals are teeming with articles on this subject, and the indolent or ignorant are being faithfully warned of the dangers by which our patients are surrounded constantly, and in a feeble way means are pointed out having for their end the avoidance of those dangers. Antiseptic midwifery, as well as surgery, is based upon the theory that the air we breathe, by which we are constantly encompassed, and which we cannot very well get away from, as well as the water we drink—that is, the few of us who drink water—in fact, our whole environment, is loaded with disease-germs, ready at all times—but sometimes with more malignancy than others—to pounce upon the unwary or unsulphurized, and enter by any or all avenues, particularly by raw or abraded surfaces, into the blood, and poison that precious fluid to destruction and death. The puerperal woman seems to have a peculiar attraction for these germs, and if one of them comes at all within her reach, it fastens itself with a death-grip upon the spot most favorable to the development of its destructive power, not only destroying her life, but multiplying itself till all persons and all things that have been near her are filled with the same deadly influence, which they may and do distribute, right and left, killing as they go. This is truly a fearful fact to contemplate, in the face of the other fact, that the only way known for obeying the scripture injunction, "Multiply and replenish the earth," is by woman assuming the risk of maternity.

One of the most talented and successful practitioners and teachers of female diseases, whose reputation is world-wide, and whom all who know honor and respect, recently published in one of the journals some "prophylactic measures which should be adopted in all midwifery cases, whether they occur in hospital or in private practice." Listen to them:

"1. The room in which the confinement is to take place should have the floor, walls, and furniture thoroughly washed with a ten-per-cent. solution of carbolic acid or mercuric bichloride, 1 to 1,000, and the bedstead and mattresses should be sponged with the same solution; carpets, curtains, and upholstered furniture should be dispensed with as far as possible.

"2. The nurse and physician should take care that all their clothing, both upper and under, be clean and free from exposure to the effluvia of any septic affection. Should either of them have been exposed within a fortnight to the effluvia of such affections as scarlet fever, typhus, erysipelas, septicæmia, or the like, they should change every article of clothing, and bathe the entire body, especially the hair and beard, with a reliable antiseptic solution; that which I prefer for this purpose is a saturated solution of boracic acid.

"3. As labor sets in, the nurse, having thoroughly washed her hands, cleaned her nails with a stiff nail-brush, and soaked them in antiseptic fluid, should administer to the patient a warm vaginal injection of antiseptic character; bathe the vulva and surrounding parts freely with the same; repeat this every four hours during labor, and keep a napkin wrung out of the warm antiseptic fluid over the genital organs until the birth of the child.

"4. Before the moment of labor both doctor and nurse should wash the hands thoroughly with soap and water, scrub the nails with a stiff nail-brush, and soak the hands for several minutes in a bichloride solution, 1 to 1,000.

"5. The third stage should be efficiently produced; all portions of placenta and membranes removed, and ergot administered in moderate doses three times a day, and kept up for at least a week, for a complete closure of the uterine cavity, expulsion of clots, and occlusion of the utero-placental vessels.

"6. The doctor, taking nothing for granted, should, at the conclusion of the labor, carefully examine the vulva of the patient. If the perineum be lacerated, it should be closed at once by suture, and should slight solutions of continuity be found in the labia or the vulvar extremity of the vagina, these should be dried by pressure of a linen cloth touched with equal parts of sol. ferri persulph. and carbolic acid, again dried thoroughly by pressure with the cloth, and then painted over with gutta-percha collodion. If this be thoroughly done absorption will be prevented at these points for at least three or four days, when the application may be repeated.

"7. After the labor, when the patient has rested, the vagina should be syringed out with an antiseptic solution, and a suppository of cocoa butter, containing from three to five grains of iodoform, should be placed within it under the os uteri. A syringe with intermittent jets should be used, which will wash away with gentle force all blood-clots.

"8. These vaginal injections and suppositories should, in cases of normal labor, be repeated every eight hours; in cases of difficult or instrumental labor twice as often, and these should be kept up for at least ten days, the nurse observing to the last the precaution already mentioned of washing her hands before every approach to the genital tract of the patient.

"9. When catheterization becomes necessary, it is safest to employ a new gum-elastic catheter, which before use should be thoroughly immersed in antiseptic fluid, and which should be destroyed at the conclusion of the case.

[1] Read before the Nova Scotia Medical Society.

"10. Last, but by no means least, let the physician inform himself by personal observation as to the competency of the nurse to syringe out the vagina, thoroughly to place the antiseptic suppositories just where they should be, and to use the catheter without injury to the patient."

These instructions were no doubt dictated by a kind heart, and are very well as far as they go; but it seems to me that in view of the prevalence of the cause of septicæmia, and the great necessity of protecting the lives of women, if it is only for the purpose of child-bearing, they fall far short of perfect protection. Perfect protection is, humanly speaking, impossible, I presume. No matter how clean the doctor and nurse may be when they start for their case, who knows what they may encounter and imbibe on the way? Sponging a bedstead and mattress is scarcely a practical suggestion for private practice, especially in the country. It appears plain enough that in this country especially, where there is such a feverish thirst for rapid increase of population, and in fact a political necessity for it, that the Government must take this matter in hand. The country should be divided into districts, and in each district should be built a large lying-in hospital, in a location approved by the Government sanitary engineer or commission. The buildings should be of iron and glass, with glass floors; the bedsteads of iron, japanned; the beds of rubber and air; carpets, curtains, and upholstered furniture should have no abiding-place in the buildings. The furniture of the lying-in room should consist of a bed and one or two white glazed earthenware basins *only*. All the rooms, when not in use, should be kept filled with the vapor of burning sulphur. There should be a sufficient number of suites of rooms, numbering from 1 to 16 in each suite, so that the patient could be promoted from No. 1, where she was delivered, to No. 16, advancing a room daily, by which time she might, under ordinary circumstances, be considered out of danger of septicæmia, and occupy the nursery parlors until she was fit to be returned to her family and friends.

Such a staff of doctors and nurses should be kept constantly ready that there would be no need of rushing from one case to another without sufficient time for antiseptic ablutions and thorough cleansing and rest. Every pregnant woman in the district should be compelled by law to report herself at the hospital at least two weeks before her expected confinement, for admission. She should be immediately scrubbed with some antiseptic fluid, and thoroughly new, clean, pure clothing provided for her. When her hour came she should be again thoroughly disinfected and conducted to the lying-in room No. 1, under spray. The doctor and nurse appointed to attend her should be thoroughly washed—not necessarily together—disinfected, and having been clothed in antiseptic gauze—not too thin—placed in a disinfected glass case and rolled into the room No. 1, with the patient, under spray, there to remain till the patient is delivered, washed, placed in a glass trough filled with warm disinfecting fluid, and passed under spray into No. 2, where another nurse takes charge of her and places her comfortably in bed. The doctor and nurse now retire from No. 1 as they entered, under spray, to their respective bath-rooms, and after being thoroughly scrubbed and clothed anew, they can await their next patient. In the meantime everything movable is taken out of No. 1, and the room thoroughly disinfected with burning sulphur, and made ready for patient No. 2. On the following morning patient No. 1, now in room No. 2, is gently and kindly washed, placed without clothing in the trough with antiseptic fluid, and rolled under spray into room No. 3, and put into a warm, clean bed. Room No. 2 is now cleaned, disinfected, and made ready for patient No. 2. The only persons having access to these rooms ordinarily are the doctors and nurses, and they invariably enter and retire under spray, as does any additional help required in cases of emergency.

All the details of nursing, feeding, and medical attendance are to be carried out with this single end in view, of avoiding the possibility of septic-poisoning, and under the strictest scrutiny of the Government sanitary engineer.

These details would be quite incomplete without taking proper precautions against the possibility of the mother being poisoned through fissures in her nipples from the infant's mouth. Millions of women probably die from poison absorbed in that way. Keep the child's mouth faithfully disinfected; but if a solution of bichloride of mercury is used for that purpose, it will be prudent not to make it too strong, for a strong solution of corrosive sublimate might prove prejudicial to the health of any but the very strongest of infants.

The deaths from puerperal fever amount to about one or two in a hundred in hospitals. The greatest mortality is in hospitals. In private practice, especially country practice, the mortality is less. In my own practice of twenty-eight years, and an experience of about a thousand cases, the mortality from septicæmia or puerperal fever has not been greater than one or two in a thousand, and it is a question whether, with such a record without any antiseptic precautions, it will be worth while to build such hospitals as I propose right away, or, furthermore, whether it would be prudent to surround the parturient woman with such meddlesome, wearisome watchfulness as will keep her constantly on the ragged edge of despair, and most certainly produce the very conditions we are most anxious to avoid. Death from puerperal fever is no worse, and scarcely more certain, than death from fear.

Don't allow anything I have written to lead you to suppose that I have anything but the most profound respect for science; but while I adore the teachings of science, I object to exciting unnecessary fears among a class of patients who at all times and under the most favorable circumstances have their nervous system severely taxed. More than half the lying-in women in Colchester County are attended by midwives, and among them puerperal fever is more rare than triplets. Take courage, therefore, my brothers, especially my younger brothers, and fearlessly, faithfully, and prayerfully if you like, do your duty to your puerperal patients, and I doubt not that He who hears the cry of the young ravens and tempers the winds to the shorn lamb will throw His strong arm and His disinfecting breath about the mothers of the future, as He so mercifully and consistently has in the past.

THE RIGHT OF PARENTS TO REFUSE SURGICAL AID FOR THEIR CHILDREN.—In a communication addressed to the *Raccoglitore Medico* Dr. Turazza, of Venice, raises the question as to how far parents should be allowed to interfere with the medical authorities in the treatment of their children. He cites some instances occurring in his hospital practice in which the lives of children were sacrificed because the parents would not consent to certain necessary surgical operations. And he asks whether, in the case of a sick or wounded child whose only hope of recovery rests upon the performance of some surgical measure, the parents should not be held guilty of homicide when they obstinately refuse to permit of the operation. And he also asks whether the surgeon, in such a case ought not, in hospital practice, at least where such a thing is possible, to undertake the necessary operation even in opposition to the will of the parents. These are certainly important questions, but at the same time questions upon which there is room for wide differences of opinion. Cases of this sort are not rare in which a life is seemingly sacrificed to the ignorant prejudices of parents, who cannot perhaps be blamed for refusing so sad an alternative. And yet the question of personal liberty is also involved, and it must be considered how far the State shall be allowed to encroach upon the family. Dr. Tarazzo did not himself attempt to answer the points raised but hoped to elicit a discussion and thereby to obtain the opinions of others.

Reports of Hospitals.

NEW YORK EYE AND EAR INFIRMARY.

Aural Service of SAMUEL SEXTON, M.D.

(Reported by William A. Bartlett, M.D., Assistant Surgeon.)

PAIN IN THE EARS DUE TO IRRITATION IN THE JAWS.

Some of the following cases of otalgia and inflammation of the ear were presented by Dr. Sexton to the physicians attending the aural clinical instruction given by the School of Ophthalmology, Otology, and Laryngology of the New York Eye and Ear Infirmary; others were taken from the clinical records. The experience of the clinic shows that among the poor earache is, in many instances, due to simple otalgia arising from dental caries. Sometimes it is found that even when otalgia is very severe indeed, no signs of hyperæmia or of inflammation are to be found in any part of the ear. Again, in certain chronic or acute inflammatory processes present in the ear, very great exasperation of the case is manifestly produced by the reflex agencies already alluded to.

These cases, divested of other details than those more particularly relating to the subject, are taken from the record-book in the order in which they presented themselves, and may be said to be fairly illustrative of the troubles under consideration. They do not, however, represent the entire number of cases of this kind seen during the period of time embraced between the first and last cases noted. Very often, it may be premised, a cure is effected in these cases by the extraction of diseased teeth.

Case I.—Bertha S——, aged six (vol. vii., p. 2). *Otalgia.*—Came to the Infirmary June 15, 1883. For the past year has at times had pains in ears, and two years ago one of them discharged. Several days ago pain began again in both ears, and she cannot sleep at night. *Examination* showed the left canal to contain a mass of cerumen; the right membrana tympani lustreless and hyperæmic. *Teeth:* Lower first and second molars on both sides mere shells. *Treatment:* She was recommended to have the shells extracted from the jaws, and was given small doses of the tincture of aconite root for the pains. *Remarks:* In this case the irritation from the carious teeth had doubtlessly been the cause of the collection of wax in the left canal and the otalgia in the right ear.

Case II.—Mary B——, aged twenty-one (vol. vii., p. 12). *Otalgia; Cerumen.*—Came to the Infirmary June 22, 1883. Complains of severe pains felt in left ear for two weeks, which seem to constantly get worse. Worse in open air, and at night so intense as to keep her awake. No tinnitus or discharge. *Examination:* Both canals filled with cerumen. *Teeth:* Both upper wisdom-teeth in a carious state. Both lower wisdom-teeth just cut. Owing to loss of some of the upper teeth, a vulcanite plate has been worn for four years past. *Remarks:* The irritation caused by dental caries and the cutting of the lower wisdom-teeth in the above case was increased, no doubt, by the vulcanite plate worn.

Case III.—Nora H——, aged forty (vol. vii., p. 44). *Otitis med. dif. Externa; Otalgia.*—Came to the Infirmary August 7, 1883. Has had headache for one year and a half, but never had aural trouble before. Has had pains in the right ear for the past two days without discharge. *Examination:* The teeth are exceedingly bad, and the right external auditory canal is the seat of diffuse inflammation. *Treatment:* Calc. sulphide in one-half-grain doses every three or four hours; tincture of aconite root in small doses.

August 10th.—Swelling less; feels a little better. The patient probably became more free of pain, for she did not return.

Case IV.—Henrietta G——, aged seven (vol. vii., p. 54). *Otalgia; Odontalgia.*—Came to the Infirmary August 14, 1883, with her own diagnosis—that her earache was due to toothache. *Examination:* The right membrana tympani is hyperæmic. *Teeth:* Both of the lower six-year molars are carious.

Case V.—N. M——, aged ten (vol. vii., p. 71). *Otalgia.*—Has had more or less deafness for five or six years past and teachers have occasionally discovered the defect in hearing. Was obliged to leave school on account of otalgia. *Examination:* The right membrana tympani lustreless, with prominent folds due to defective development. The left canal contains considerable soft wax, obscuring view of membrana tympani. *Teeth:* All of the six-year molars are carious as well as many of the other teeth. Hears a loud voice only in both ears. *Treatment:* Small doses of aconite were ordered and the teeth were to be attended to.

Case VI.—Amelia P——, aged twenty-two (vol. vii., p. 84). *Otalgia.*—Came to the Infirmary on September 18, 1883. Heretofore has never had any ear trouble, but for past two weeks has had a pain in left ear, intermittent in character, and worse at night when lying down. Had both upper canine teeth extracted and the upper right second molar, but this had no perceptible influence on the otalgia. The ear pain shoots over the brow and down the lower jaw. Has some laryngeal discomfort on account of pharyngitis with tendency to ozena. Menstruation is normal. *Examination:* Right canal small and membrana tympani hyperæmic. Canal contains small quantity of cerumen. The left ear in same condition as the right. *Teeth:* Had both upper second bicuspids removed previous to coming. In the lower jaw there remain in a carious state the two right inferior bicuspids and the first left bicuspid. Removal of the dead teeth recommended.

Case VII.—Lizzie C——, aged twenty, Irish, seamstress. *Otalgia.*—Came to the clinic October 1, 1883, giving the following history: No specific, malarial, or rheumatic taint. Has slight pharyngitis and has never suffered from dentalgia to any great extent. During the past four years has had repeated attacks of earache on left side lasting for a day or a day and a half, unaccompanied by tinnitus or deafness. The present attack, for which she came for relief, began four weeks ago and has continued constantly and quite severe to date. *Examination:* Teeth covered with tartar, several being carious in both the upper and the lower jaw. The auditory canals and tympanic membranes normal in appearance. *Treatment:* To have the dead teeth extracted and tartar removed. October 4th, removal was followed by almost complete relief. October 7th, has been entirely free from pains since last note was made.

Case VIII.—Mary L——, aged twenty-four (vol. vii., p. 119). *Otalgia; Otitis externa circ. Acuta; Disease of Teeth.*—Came to the Infirmary October 30, 1883. Takes cold easily. For a week so much pain in right ear that rest has been difficult, and in consequence she is very nervous. The right ear discharges a little; tinnitus is not complained of, and hearing is unaffected. Two years ago the ear pained without discharging. The teeth have ached a good deal. *Examination* of right ear showed that the meatus was closed by swollen tissues; hears a low voice in both ears. *Teeth:* Upper right first and second molars absent. Lower first right molar carious, and the third molar just cut. *Treatment:* Calc. sul., grs. $\frac{1}{10}$ every two hours; hot poultices.

November 3d.—No redness; pains ceased on night of the 1st inst., when a discharge began; canal contains some pus. Treatment continued. Advised to have dead teeth removed and fillings put into such as had sufficiently healthy pulps.

It is noteworthy in the above case, that besides dental caries there was the additional irritation caused by the rather late, and probably somewhat difficult, eruption of a wisdom-tooth on the same side with the affected ear, and it is not improbable that the previous otalgia experi-

enced was due to this cause. That the furuncle was due to the irritation in the nerves of the inferior maxillary branch seems most probable.

In commenting on this subject, Dr. Sexton drew attention to the frequent attendance of females suffering from aural trouble through sympathy of the nerves, and the comparative infrequency of the complaint among men; even in children, he thought the greater number of otalgias occurred among females. In reference to the treatment of these cases, it was believed that since dentistry had become such a popular business, and dead and diseased teeth had been so carefully retained in the jaws through their influence, especially among the better-to-do, nervous diseases about the head were becoming alarmingly common. The very general custom of wearing false teeth in the mouth attached to vulcanite rubber, celluloid, and other plates was also an evil of vast proportions. Indeed, he sometimes thought that the evil done through ill-advised dentistry was greater than the possible good arising from the work of the more capable dentists.

Progress of Medical Science.

The Dangers of Removal of the Thyroid Gland.—Dr. G. Zesas comes to the conclusion, based upon the results of a number of experiments on animals, that the thyroid gland is a supplementary organ to the spleen, and that its extirpation is followed by an increase in the number of the white blood-corpuscles. Death invariably ensued upon the removal of both organs. There is another much more important function of the thyroid gland, however, and this is its office of regulating the circulation within the cranium. As shown by Schiff, the removal of this gland is followed by nervous disturbances, such as stupor, sluggish movements without actual paralysis, fibrillary muscular contractions, and tremor, and even in some cases well-marked tetanus. Zesas concludes on this account that removal of the thyroid gland is a physiologically unjustifiable operation.—*Wiener Medizinische Wochenschrift*, August 16, 1884.

Masked Septicæmia.—Dr. E. Moritz relates three cases of septicæmia in which the symptoms were of an unusual character, leading at first to the diagnosis of some other condition. In the first case the patient complained chiefly of headache and pains in the limbs. The body was covered with numerous petechial spots. It was supposed at first, owing to the peculiar temperature curve, that the case was one of relapsing fever, but a daily examination of the blood failed to show the presence of spirilli. The diagnosis of septicæmia was then made and this was confirmed by the autopsy. The second case was supposed to be one of diphtheria, though the probability of septicæmia was recognized before death. In the third case the symptoms seemed to point to a commencing small-pox. In all these instances the autopsy revealed small sub-pleural ecchymoses, septic endocarditis, a large softened spleen, and parenchymatous degeneration of various organs. The points of infection seemed to have been: in the first case a large clavus on the sole of the foot; in the second a diphtheritic inflammation of the pharynx; and in the third case extensive submucous extravasations in the small intestine.—*Schmidt's Jahrbücher*, July 23, 1884.

Treatment of Strumous Adenitis by Nitrate of Silver.—Professor Ferraris recommends daily inunctions of strumous glands with an ointment containing one drachm of nitrate of silver to ten drachms of vaseline. Four applications usually suffice to obtain diminution of pain, or even complete resolution of the enlarged glands. It is claimed that by this means the inflammation is limited to the gland tissue, and the formation of fistulæ with subsequent cicatrices is averted.—*Journal de Médecine de Paris*, August 16, 1884.

Hydatid Cyst of the Liver—Spontaneous Cure.—Dr. Conti relates the case of a man, sixty years of age, of a robust physique, who had always enjoyed excellent health up to the time of his present trouble. He began to suffer from gastritis with violent pains over the hepatic region, like those caused by the passage of a biliary calculus. In a short time symptoms of hepatitis appeared, fever, jaundice, and enlargement of the liver without any signs of a distinct tumor. Finally the patient fell into a state of collapse, with constant vomiting and obstinate constipation. Some days later he had a number of diarrhœtic stools mixed with pus. On examination of the discharges an echinococcus cyst the size of an orange was discovered. The vomiting ceased, though the fever and diarrhœa persisted for some time, with symptoms of pyæmic infection. Dr. Conti believes the cyst was situated on the under surface of the liver and was discharged by ulceration through the wall of the colon.—*Journal de Médecine de Paris*, August 16, 1884.

Exsection of the Fascia in Dupuytren's Contraction.—In an article in the *Wiener Medizinische Wochenschrift* of August 9, 1884, Dr. R. Gersuny describes a new operative measure used by him in the treatment of contraction of the palmar fascia. He makes a longitudinal incision of the integument over the prominent aponeurotic bands, and then, through the opening caused by the retraction of the skin, excises this part of the palmar fascia. The wound is then easily closed by a few sutures and dressed antiseptically. The advantages of this method, he claims, are that there are no thickened and knotty cords left in the aponeurosis, and further, that owing to the direction of the line of incision in the skin there is but little retraction of the tissues and the wound heals readily.

Urinary Disturbances in Diseases of the Nervous System.—The urinary organs are often the seat of various troubles during the course of nervous diseases. In an article on this subject (*Revue Médicale*, August 23, 1884) Dr. Charles Féré groups these phenomena under disturbances of secretion, excretion, and sensibility. A diminution in the quantity of urine, he says, is observed, especially in severe forms of hysteria, when the ischuria may persist for several days. In such cases the vomited matters contain urea, a point of some value in the detection of malingerers. Under the influence of strong emotions there may be a decrease in the amount of urine passed, as well as a relatively smaller proportion of urea and chlorides. Polyuria may be caused by undue sexual excitement, severe neuralgia, and especially the milder forms of hysteria. Polyuria may also follow the renal or vesical crises of locomotor ataxia, and may exist as a permanent condition in affections of the mesocephalon. Albuminuria and glycosuria may accompany this condition, not only following lesions in the floor of the fourth ventricle but also occurring in diseases of the mesocephalon. A slight degree of albuminuria is met with also in several convulsive neuroses, and more particularly in epilepsy. The author explains this occurrence by supposing submucous extravasations into the walls of the bladder, similar to the facial ecchymoses sometimes occasioned by an epileptic attack. If the urine contains a large quantity of albumen, it is merely coincidental and due to some other pathological condition. A transitory neuropathic glycosuria may follow physical or mental fatigue, sexual excesses, or depressing emotions. The increase of urea and the urates may be encountered in any of the affections with clonic or tonic convulsions. Retention may be due to spasm of the sphincter or paralyses of the walls of the bladder. Paralytic retention is common in apoplectic coma, traumatic affections of the cord, Pott's disease, acute or subacute myelitis. In certain cases of this kind the urine becomes rapidly alkaline, a fact explainable only on the theory of some trophic trouble. True incontinence occurs only in

acute myelitis or in traumatic affections of the cord. Unconscious micturition is common in tabes dorsalis, general paralysis of the insane, and cerebral tumors located in the mesocephalon. The neurotic incontinence of childhood is often, the author asserts, a forerunner of epilepsy or ataxia. The various forms of irritable bladder may be met with in acute or chronic nervous conditions, in neurasthenia, spinal meningitis, or locomotor ataxia. The author does not agree with M. Geffier, who asserts that ataxia may be recognized by its urinary symptoms apart from any others, but he thinks that these troubles may often be of purely nervous origin, and are most probably of this nature in the absence of any well-defined lesions of the urinary tract.

Scrofula and Tuberculosis.—The history of the teachings upon tuberculosis and scrofula is a somewhat curious one. In the sixteenth century scrofula was the only condition recognized, but little by little tuberculosis began to assume an independent position in the minds of pathologists, and up to within a comparatively recent time they were supposed to be two separate and distinct diatheses or morbid conditions. But now tuberculosis began to get the upper hand, and one after another of the so-called scrofulous affections were recognized to be tubercular in character. Koch's discovery of the tubercle bacillus has lent additional weight to these views, and at the present day there are very few writers who would deny the tubercular nature of fungus arthritis, lupus, caseous cervical adenitis, and cold abscess. While some deny the very existence of scrofula as opposed to tuberculosis, others retain the name, using it merely to designate a diathesis or morbid predisposition. The exterior manifestations of this condition have been reduced to certain forms of eczema, impetigo, sluggish inflammation of the mucous membranes, and possbily superficial adenitis. But it is not certain that even these local manifestations of the scrofulous diathesis may not eventually be found to be caused by a mild form of tuberculosis. Dr. J. Grancher has recently inoculated guinea-pigs with pus and crusts of impetigo, and publishes the results obtained by him in *L'Union Médicale* of August 21, 1884. The experiments were all conducted with great care, every precaution being taken to protect the animals from contagion from without. Several inoculations were first made with pus taken from suppurating glands of the neck and from spina ventosa of the thumb, and in every instance the animals acquired tuberculosis. In the second series the pus was taken from impetigo crusts, strumous conjunctivitis, etc. The results were negative in all but two out of twenty-three cases. In the two successful inoculations the pus was not taken from the impetigo crusts, but in one case from a neighboring papule, and in the other from a small abscess of the skin. Dr. Grancher concludes that his experiments, as far as they go, would seem to show that the superficial scrofulous inflammations are not in themselves tuberculous, but that they may be the door through which the specific microbe gains admittance into the human organism.

Treatment of Suppurating Buboes.—This affection may be cured, according to Delahousse, in from six to twelve days by adopting the following procedure (*L'Union Médicale*, August 5, 1884): The skin is washed with soap and warm water, shaved, and then washed again with a one per cent. solution of carbolic acid. These precautions having been taken, the abscess is punctured and a solution of chloride of zinc (one part to six of distilled water) is injected into the cavity. After being retained for a short time in contact with the walls of the abscess, it is let out and replaced by a full injection of carbolized water. The wound is then covered with eight or ten folds of gauze saturated with carbolized water and glycerine (four per cent.). The dressing is retained for forty-eight hours, when the former procedure is repeated, the same precautions being observed.

Treatment of Dandruff.—M. Vidal uses the following pomade in the treatment of dry seborrhœa of the scalp (*Revue Médicale*, August 23, 1884): Precipitated sulphur, one-half ounce; balsam of Peru, one-half drachm; cocoa butter, three drachms; castor-oil, one and one-half ounce. The proportions of the cocoa butter and castor-oil should be varied according to the season to obtain a pomade of the desired consistency.

Acute Nicotinism.—In experiments upon dogs and rabbits Dr. Tomassio found that a subcutaneous injection of pure nicotine caused a reduction of temperature of from 1.5° to 2°. Immediately following the injection there was a slight muscular trembling, and a diminution in the number and force of the pulsations and respiratory movements. Collapse followed in from forty to fifty minutes. At the autopsy the author found congestion and hemorrhage into the lungs, the brain, and the abdominal organs. There was an intense odor of tobacco in all the tissues.—*Lyon Médical*, August 24, 1884.

Traumatism and Tuberculosis.—At a recent meeting of the Surgical Society of Paris (*L'Union Médicale*, August 5, 1884), M. Kirmisson related the case of a child, five and one-half years old, suffering from hemiplegia with contractures, coming on a week after a fall on the head. The appearance of the cerebral symptoms, severe pain in the temple on the side of the injury, the plaintive cries, vomiting, etc., led to the supposition of a purulent collection following probably a fracture of the cranium. Yet the slow progress of the symptoms, following at some interval the traumatism, caused M. Kirmisson to think that there might be a mere coincidence between the injury and the appearance of a tuberculous or cancerous neoplasm. The skull was nevertheless trephined, but with negative results, and the child died within twenty-four hours. At the autopsy the bones, membranes, and surface of the brain were found to be healthy. But in the centre of the right hemisphere there was a tuberculous mass which had destroyed the optic thalamus and corpus striatum. Histological examination established the tuberculous nature of the tumor. The speaker related several other cases, collected from the literature, showing a simple coincidence between traumatism and the development of tuberculosis.

Gastric Secretion in the Fœtus.—When iodide of potassium is given to pregnant rabbits it quickly appears in the amniotic fluid. It is often found also in the stomach of the fœtus, but this was supposed to be due to swallowing of the fluid, and, indeed, the fact was cited by Zuntz as a proof that the fœtus possessed the power of deglutition. Krukenberg, however, has found this substance in the stomach of the fœtus of the guinea-pig, after its subcutaneous injection into the mother, before it was present in the amniotic fluid. This would show that the iodide of potassium passed through the placenta into the fœtal circulation and was thence excreted (?) into the stomach.—*Wiener Medizinische Wochenschrift*, August 23, 1884.

Iodoform in the Treatment of Gonorrhœal Ophthalmia.—Dr. L. Guaita has treated successfully a severe case of blennorrhagic conjunctivitis on the following plan: Every morning, after having thoroughly bathed the eye with a solution of boracic acid, he filled the conjunctival cul-de-sacs with a quantity of finely pulverized iodoform. In addition, the eye was covered with iodoform gauze and a layer of gutta-percha cloth. This operation causes only a slight smarting, which disappears in a few minutes. If the iodoform gives rise to any severe pain it is because it is not finely enough pulverized.—*Journal de Médecine de Paris*, August 23, 1884.

Pelvic Hæmatocele.—In a thesis on this subject Dr. Jousset has collected the statistics of upward of thirty cases of pelvic hæmatocele, more than twenty of which ended fatally and were examined post-mortem. As a result of his studies he arrived at the following conclusions: 1. This affection is not a disease *sui generis*,

but is a symptom of several very different conditions. 2. The tumor itself is so characteristic that the diagnosis may be made without an exploratory puncture, provided only that the patient be seen early. 3. The symptoms of hæmatocele are for the most part those of the disease which has occasioned the extravasation. 4 One variety of hæmatocele arises in consequence of extra-uterine pregnancy or from rupture of the non-gravid condition. In this case the affection occurs suddenly with signs of internal hemorrhage, either after some vague symptoms of pregnancy or in the midst of perfect health. This manner of onset is rare and is of ominous significance. 5. Another form of hæmatocele, also rare and of evil prognosis, occurs in connection with uterine hemorrhage. It comes on rapidly after metrorrhagia, or more slowly after dysmenorrhœa. 6. The most common variety is that which arises in the course of pelvic peritonitis from rupture of the vessels in the pseudo-membrane. The prognosis in this form is of less gravity. 7. Surgical measures are only permissible when rupture into the abdominal cavity is threatened.—*Centralblatt für Gynäkologie*, August 23, 1884.

Hygiene of the Mouth in the New-Born.—In an article on the diseases of the mouth in infants (erythema, Bednar's aphthæ, stomatitis catarrhalis, thrush, etc.), Dr. Epstein states it as his belief that the most frequent cause of these affections is to be found in the manner of washing the mouth of the new-born child. The cleansing of the mouth, as usually performed by nurses and midwives, is done roughly and unskilfully, and not only causes injury to the mucous membrane, but is also frequently the means of introducing infection from without. He advises that the buccal cavity be washed only once a day after the morning bath, and protests especially against cleansing the mouth immediately after birth without previous disinfection of the nurse's hands. In the treatment of aphthæ no attempt should be made to remove any patches except those that lie within sight and easy reach, and any undue force should be most carefully avoided.—*Centralblatt für Gynäkologie*, August 23, 1884.

Symmetrical Brachydactylus.—Dr. K. Löbker relates the case of an otherwise normally developed woman who had a congenital shortening of four fingers due to absence of the middle phalanx. The thumb was, however, normal. The author argues that, in this case of symmetrical absence of the middle phalanx of all four fingers, if the first phalanx of the thumb were really the middle phalanx, it would also have been wanting. Hence the metacarpus pollicis cannot be regarded as a phalanx. —*Centralblatt für Chirurgie*, August 23, 1884.

The Weight of Drops.—M. Boymond has ascertained by a number of trials that the weight of a drop depends upon the external diameter of the tube, and not, as is usually supposed, upon its internal diameter. The size of the latter affects only the rapidity of the flow. The nature of the liquid (water, alcohol, ether, etc.) also determines the weight of the drop independently of any substances which it may hold in solution. In order to obtain drops of distilled water (of a temperature of 58.5° F.) weighing five centigrammes—or 80 drops to a drachm—the external diameter of the tube should be exactly $\frac{3}{5}$ inch. The author gives a table showing the comparative weights of drops of different medicinal preparations falling from a tube of the given size. One gramme (15 minims) of distilled water is equivalent to 20 drops; of alcohol at 90°, 61 drops; at 60°, 52 drops; of an essential oil, 48 drops; of a volatile oil, 50 drops; of laudanum, from 33 to 35 drops, varying according to its strength. The tinctures give a varying number of drops according to the proportion of alcohol. An aqueous solution, no matter what its strength, gives the same number of drops as distilled water. Thus two solutions of muriate of morphia of $\frac{1}{20}$ and $\frac{1}{100}$ respectively give each 20 drops to the gramme.—*Journal de Médecine de Paris*, August 23, 1884.

Periproctitis Simulating Typhoid Fever.—Professor Lücke relates the case of a strong and healthy man who was struck on the abdomen with a pole, but without receiving any apparent injury. Two weeks later he was seized with typhoid symptoms, high fever, and diarrhœa. These were followed by tenesmus, bloody, and then purulent discharges, a gangrenous piece of the rectum was passed, and soon the man died. At the autopsy there was found a perforation in the posterior wall of the rectum and a large fecal abscess extending to the sacrum. There were no typhoid lesions in the intestinal canal, no caries of the sacrum or coccyx, and no actinomycosis. The author believed that the affection was caused by a lodgment of the actinomycosis fungus in the folds of the rectum, giving rise to ulceration and abscess. The original fungus of actinomycosis can often not be found in abscesses of which it is the cause.—*Deutsche Medicinal-Zeitung*, August 21, 1884.

An Instrument for Pencilling Children's Throats.—Dr. H. Guttmann has devised an instrument to facilitate the making of local applications to the throat in dealing with refractory children. It consists simply of a wedge of hard rubber, with rounded edges, to the broad end of which is attached a handle. The wedge is perforated to permit the passage of the brush. By the use of this instrument it is claimed that the possibility of injury to the soft parts is done away with, the diphtheritic throat may be pencilled with great ease, and lastly the danger of infection from coughed-up matters is avoided.—*Deutsche Medicinal-Zeitung*, August 18, 1884

Acute Painful Paraplegia.—Dr. Dumolard describes under this name a special form of paraplegia, not mentioned in the books, of which he has had occasion recently to observe several instances. The affection commences with lumbar pain and a sensation of uneasiness and stiffness in the back. This pain, variable in its intensity and duration, begins in the lumbar region and extends up the back, passing sometimes into the neck. There may also be pains in the thighs and legs, not following, however, the course of the sciatic nerve nor localized in the joints, but extending over the entire surface of the limbs. When the patient attempts to walk, his gait is like that of a person suffering from rheumatism. In severe cases the pains begin with great intensity and are accompanied with a slight febrile movement. After some days of suffering the patient finds himself paralyzed in his lower limbs and is unable to rise from the bed. The reflexes are so exaggerated that the least touch on the feet excites tetanic contractions. The general condition of the patient is never serious, the pulse does not exceed 80, and the skin is moist. The bladder is usually somewhat weakened, but neither the paralysis of the bladder nor of the limbs is ever total. The pains are usually confined to the region of the kidneys and to the lower limbs during the whole course of the affection, but sometimes they leave these parts suddenly and attack the arms, which then also become paretic. The acute stage of the disease usually lasts from ten to fifteen days, the pain then rapidly subsides, and the paresis of the bladder and extremities begins to disappear. In all the cases observed by Dr. Dumolard complete recovery took place after from thirty to forty days. The cause of this affection is not determined, though cold and damp seem to have some share in its production. The persons attacked had arrived at the middle age. Counter-irritation along the vertebral column, purgatives, bromide of potassium, chloral, and morphine are the measures which seemed to do the most good in Dr. Dumolard's hands. The author does not regard the disease as belonging to any form of meningitis, but thinks it may be identical with an epidemic affection recently observed in Spain. This was characterized by pain and weakness in the lower extremities, and having once appeared in the village of Azannon recurred nearly every year under an epidemic form.—*L'Abeille Médicale*, August 25, 1884.

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THE ALCOHOL QUESTION.

WHEN that goody young man Telemachus and his celestial guide Mentor, both models of excellent propriety for the times in which they lived, were on their memorable travels, they became acquainted with a race of people who probably had been educated from science text-books similar to those which are largely in use at the present day. "Do they drink wine?" Telemachus asks of Adoam. "Oh, no!" replies Adoam; "they would never do that! It is not because they want grapes—no country grows such delicious ones; but they content themselves with eating them before they are spoiled by fermentation, and they fear wine as the corruptor of man. It is a species of poison, they say, which maddens people; it does not kill a man outright, but it renders him a brute. Men can preserve their health and strength without wine; with wine they run the risk of ruining their health and losing their good manners."[1]

In discussing the alcohol question from a medical standpoint we have no occasion for denying that the ideal society which Fénélon describes was right in its judgment and in its practice, and that the Utopia of our civilization will be distinguished by temperance and sobriety. It is, however, notoriously a fact that society is not now, and will not for many years to come be, in that ideal condition; that debilitating diseases abound from whose results the remedial use of alcohol often offers the best means of defence; that multitudes of persons have weakly neurasthenic constitutions which seem to be benefited by the vinous stimulus indulged in moderation; that, in fact, alcoholic medication constitutes an important part of the physician's armamentarium: all this must be conceded, besides the uses of alcohol in the arts.

The two aspects of the subject must be kept in mind in any attempt to treat it fairly; the dark side with its horrors, which are undisputed (representing the abuses); the counterpart, or the strictly medical side, with which chiefly physicians are concerned and which has to do with the benefits obtainable from a physiological and therapeutical use of alcohol, which is properly a medicament, and as such of so great value that Raymond Lully styles it "the supreme cordial of the human body."[2] The discussion of the question is further complicated by the fact that the effects of alcoholic stimulants vary according to the *quality* of the spirit used and the *quantity* taken, and according as the individual is sick or well.

1. With regard to quality, this would have to be considered under several heads, such as the kind of alcoholic liquor used, whether fermented or distilled, and from what source, and whether modified by age and by the natural or artificial mixture of other substances, such, especially, as the higher atomic (amyl, butyl, propyl) alcohols. It is known that age has an improving effect on both fermented and distilled liquors, by some process as yet unknown. Eliminating such noxious impurities as fusel oil and aldehyde, in any case, whether used as a beverage or as medicine, the action of the intoxicant would be different on the economy according as the product ingested were fresh from the fermenting vat or still, or had become mellow from age.

That the natural or artificial contaminations of spirituous liquors, of which the most common and the most baneful is undoubtedly amyl alcohol, or fusel oil, materially modify the stimulant or narcotic effect of the alcoholic preparation is well known to physiologists at the present day. Of this we have lately had a decisive demonstration in the instructive experiments performed on animals (dogs and swine) by Drs. Dujardin-Beaumetz and Audigé, of Paris.[1] These experiments proved the exceeding noxiousness of all the higher atomic alcohols as compared with ethyl alcohol, as also the powerfully toxic nature of the alcoholic derivatives, acetic aldehyde, acetic ether, and acetone. This was shown by the results of acute poisoning with all these substances in the state of purity, and the state of dilution, and by the results of chronic poisoning which demonstrate the relative innocuousness of rectified wine, grain, beet, or potato spirits as contrasted with crude spirits that have not undergone rectification. A wide experience, moreover, has proved that the least noxious of the intoxicating beverages are those which approach the nearest to the matured products of vinous fermentation.

Organic chemistry has taught us that the alcohol which distinguishes vinous fermentation and vinous distillation is the ethylic—C_2H_6O. It has been again and again made clear that while a certain moderate quantity of diluted ethyl spirits may be borne by the human organism not only with impunity, but often with the happiest physiological results, the ingestion of even inconsiderable quantities of the other alcohols—unfortunately too generally components in notable proportion of the crude liquors of commerce—is attended with results which are always pathological and which are often most deplorable.

2. Under the head *quantity* we should have to consider acute and chronic poisoning by, and the stimulant and narcotic action of the alcohols. Here there is no dearth of facts from which to form judgments, and we now know the fixed toxic dose for every member of the alcohol series. It has been, for instance, shown that the medium quantity of ethyl alcohol sure to cause death within twenty-four hours is eight grammes per kilogramme of weight of the person or animal ingesting the spirit, and that the quantity of the other alcohols is much less; it has also been shown that when the daily dose of pure ethyl

[1] Fénélon's Télémaque, Liv. viii.

[2] Stillé: Therapeutics and Materia Medica: article, Alcohol.

[1] See these experiments detailed at length in the Therapeutic Gazette for July and August, 1884, with comments by Dr. Hurd, of Newburyport, Mass.

spirits does not exceed one gramme for each kilogramme of weight, it may be borne without inconvenience for a very long time, no perceptible lesions on the part of the digestive, hepatic, or nervous systems being produced.[1]

3. With regard to the action of alcohol on the human system, every physician is well aware of the difference of effect, whether the individual be in robust health or whether he be suffering from the debility of disease, quantities being toxic in the one case which are therapeutical and restorative in the other. There is no doubt that in sickness we often obtain a healthful stimulant action from doses which to a well man would be narcotic and detrimental; nor should there be any confusion between these terms stimulant and narcotic. The author of the best work in the English, if not in any language on stimulants and narcotics (Anstie), defines a stimulant as "any substance which, brought to bear in proper quantities upon the nervous system, facilitates nutrition." At the head of all stimulants he would place oxygen. Anstie's investigations show that alcohol is a food, medicine, or poison, according to the circumstances under which it is taken and according to the quantity taken. The effect of a small quantity he calls true stimulation, and urges that this is often beneficial, and comparable to the effect of food; a large dose produces narcotism, and is always injurious. A small stimulant dose is physiological, a large narcotic dose is pathological, and between the two there is a definite poison line, varying with each individual case. He denies that true stimulation is ever followed by reactive depression. True stimulation, whether produced by the oxygen we breathe or by the wine we drink, facilitates nutrition and hence supports life. Such, in brief, is Anstie's doctrine.

A careful consideration of the alcohol question from this standpoint and in the manner we have above indicated (which is the only fair way) shows how difficult and how complex is the problem with which legislators, sociologists, and educators are dealing; moreover, it will be seen how great are the difficulties in the way of a proper and comprehensive presentation of the subject in textbooks on physiology designed to instruct youthful minds in the truths concerning the actions of alcohol on the human system. Better that the children attending our public schools should grow up without this technical knowledge, but with the examples duly impressed upon them of the evils of intemperance on individuals, their families, and on society, all of which come under their daily observation and may be made by parent or teacher the theme of many an effective moral lesson, than that such loose and superficial teachings and half-truths as characterize the treatment of the subject by some of our physiological books should be instilled into their minds, much of it to be unlearned in after years.

[1] See the Recherches sur la puissance toxiques des Alcools, by Dujardin-Beaumetz.

DEAD TEETH IN THE JAWS.

THE columns of THE RECORD some months since contained several interesting communications to the effect that the retention of these defective members was not always unattended with danger to the patient. The "clinical notes on aural disease" in another part of THE RECORD furnish additional evidence of the perils of tooth-saving. It is stated by the careful observer that not only a large number of aural diseases, including otalgia pure and simple, may arise from the irritation of diseased teeth, but that doubtlessly a great deal of the nervousness with which some people are affected at the present day is attributable to the ill-advised retention of dead teeth and the unskilful stopping of teeth where the pulp is sensitive, though not as yet irreparably impaired by caries. It would seem, from the accumulated evidence on this point, that perhaps the time is nigh at hand when medical men should be themselves better informed concerning diseases of the jaws and mouth, rather than refer the ailments of this region to individuals whose limited knowledge of medicine does not prevent them from "treating" dead teeth long after their presence in the jaws has given rise to alveolar abscesses and neuralgias more or less painful.

One recalls in this connection the rather amusing emulation shown by the numerous correspondents of a London medical journal some years ago concerning the possibility of replacing teeth that had recently been lost, as though such a proceeding were one to be commended. It would not be strange if, in the course of events, the day would soon come when just the contrary practice would prevail—when all teeth without pulps, and hence in process of more or less rapid decay, as well as those which the deposit of tartar, or other cause, had entirely divested of periosteal nourishment, would be promptly condemned as unfit to remain in the jaws—regarded, in fact, as foreign bodies liable to give rise not only to cerebral irritation and disease in the organs of special sense, through the propagation of local disturbances in the mouth to the regions mentioned, but to endanger likewise the general health through purulent matter discharged into the mouth from alveolar abscesses, to be continuously swallowed for a long time, or, indeed, in some instances, to be absorbed and thus produce septicæmic poisoning.

It is certainly gratifying to note the establishment of instruction in oral surgery in some of the medical schools, and it is to be hoped that this subject will receive the attention its importance demands. It must not be supposed, however, that "dentistry" should be taught, for surely this in its broadest sense by no means constitutes oral surgery; nor does the latter embrace the former. The stopping of teeth and the fitting of plates in the mouth, requiring skill and experience for their successful performance, need no more be taught the medical student than the manufacture of surgical instruments and appliances. On the other hand, there has always been a desire to combine the medical art with the mechanics of dentistry, but the medical training usually given the dental apprentice is entirely too superficial to qualify him to treat disease, whether arising from the state of the teeth or not; in point of fact, his training does not always prevent harm being done to persons who are willing to have placed in the mouth some one or more of the numerous harmful dental appliances of the present day.

SOME THERAPEUTICAL DELUSIONS.

WE have received from an esteemed correspondent an extremely pungent criticism of the therapeutical fashions of the day. The writer earnestly urges the necessity of a more critical and careful analysis of therapeutical ex-

perience, and prays for a cyclone to strike some three-fourths of the therapeutical recommendations now in vogue. He concludes by enumerating a series of therapeutical delusions which he finds to be more or less current.

While we greatly deprecate nihilism in therapeutics, believing that that phase of medical feeling has had its day, we earnestly desire to encourage a more critical study of the action of remedies and of alleged therapeutic results.

We have carefully examined the "delusions" set forth by our correspondent, and find that in the main they agree with results of the more conservative clinicians and of pharmacological experiment.

They are as follows:

"It is a delusion that veratrum viride or aconite will abort croupous pneumonia or essentially modify its course; that potas. chlorate is of any use in catarrhal angina; that potassium nitrate is an antipyretic, anti-rheumatic, or (to any appreciable extent) diuretic; that lime-water will, in practice, dissolve a diphtheritic or croupous membrane; that nitrate of silver is of any value in epilepsy; that the excessive and continued use of iron induces plethora with dizziness, flushings, and palpitations; that iron should be given in phthisis; that mercury is antiplastic and antiphlogistic; that arsenic has any value in diabetes mellitus; that potassium iodide promotes absorption of serous exudations and non-specific connective tissue in hyperplasiæ; that sulphur and sulphur in baths is of any value in rheumatism; that charcoal, when moist in the stomach and intestines, has any absorptive power, or is of any use in flatulence by virtue of that power; that dilute acids are 'cooling,' *i.e.*, lower temperature and lessen heart-action in the non-febrile; that colchicum is of benefit in rheumatism; that drinking sulphuric acid prevents chronic lead-poisoning; that iodoform given internally is anything but a poor substitute for potassium iodide; that croton-chloral has a specific effect on the fifth cranial nerve; that tannic acid (or the plants containing it) is of any value given internally for hemorrhages, except perhaps those of the stomach and bowels, or that it is of any value as a gargle in chronic pharyngitis, or that it is an astringent to mucous surfaces and blood-vessels; that turpentine is a stimulant to the heart and nervous system; that musk is a nerve or heart stimulant (it belongs, with turpentine, to nerve depressants); that ox-gall is of the slightest therapeutical utility at either end of the digestive tract; that hydrocyanic acid in ordinary medicinal doses is either a local or general sedative (it is rather an irritant); that quinine in either small or large doses is a stomachic tonic, except in convalescence from malarial attacks; that hydriodic acid has any specific effects other than those possessed by the iodides."

PALATO-GRAPHY.

Dr. Harrison Allen, of Philadelphia, has described[1] a method of recording the movements of the soft palate, which is likely to prove of much scientific and perhaps practical importance. He says:

"When a straight rod is passed through the nose from before backward in the living subject, as far as is possible, it will be found to impinge against the roof of the naso-pharynx. In this position the rod is not influenced by any motions of the soft palate; but if the end of the rod which remains without the nostril be raised so that the rod be brought in contact with the anterior border of the nostril, the pharyngeal end of the rod will lie in a position which will cause a decided motion to be transmitted to it when the soft palate is raised."

By the use of a flexible copper wire attached to the rod, and then to a head-band, the rod is kept in place on the palate, and the free end is allowed to rest upon a revolving drum or kymographion, where it registers its movements. It is then found that the rod produces different curves with every motion of the palate in speaking, coughing, hawking, breathing, etc.

Dr. Allen has studied these curves and found them to vary for each of the different vowels and consonants, as well as for different words.

The tracings obtained are tolerably alike for the same words, although different individuals sometimes produce different tracings.

Dr. Allen gives illustrations of the tracings obtained with vowels, consonants, syllables, words, phrases, etc.

He believes that palato-graphy may be of use in studying the mechanism of the soft palate in disease, as well as in health. It may probably prove of use in studying stammering, and in determining the degree of degeneration of the levator-palati muscles in progressive dry aural catarrh.

It may also be employed in studying phonetics, and the suggestion is made that the instrument may be available for the comparative study of language, for the instruction of the deaf, and for the formation of a new system of short-hand writing.

While one can see many practical objections to such a rose-colored view of the future of the palate-myograph, it is evident that Dr. Allen has made an addition to our instruments of precision which will be of considerable value.

[1] A New Method of Recording the Motions of the Soft Palate. By Harrison Allen, M.D. Philadelphia: P. Blakiston, Son & Co. 1884.

News of the Week.

The Dosage of Phosphorus.—Dr. Rutgers, of Rotterdam, directs attention to a typographical error occurring in The Record of April 5, 1884, p. 376. It is there stated that Dr. Kassowitz recommends teaspoonful doses of a solution of phosphorus in cod-liver oil, 1 part to 1,000, in the treatment of rickets. The proportion should have been given as 1 to 10,000, the former dose being that suitable for an adult, and of course much too large for a young child. We always endeavor to be scrupulously exact in transcribing directions for the treatment of disease, especially when the question of the dosage of powerful drugs is involved, but errors will occasionally creep in, despite the greatest vigilance. It is always a good plan before accepting any formula, no matter by whom recommended nor where found, to make a simple calculation in order to determine the exact amount of the active ingredient contained in the prescribed dose. If this be done in every instance, errors of transcription or of printing can readily be detected, and the possibly unoward consequences averted.

Homœopathy and the Garfield Memorial Hospital.—In order to satisfy the demands of certain homœopaths at Washington, the Trustees of the Garfield Memorial Hospital have adopted the following by-law: "The executive committee shall provide that homœopathic treatment shall be furnished to those patients who desire it, provided the physician selected for such purpose shall render his services upon the same terms as the medical staff of the hospital."

Death of a Noted Epidemiologist.—The death is announced of Mr. John N. Radcliffe, M.R.C.S., one of the best of modern epidemiologists. He was the author of a number of painstaking reports upon epidemics, being especially skilful as a historian in that line. He was for some years one of the two public health inspectors of London.

The Cholera.—Up to September 30th, the total number of deaths from cholera in Europe was not far from 15,000. Of these Italy has over 8,000; France, about 6,000; Spain, 400.

In France there are now 23 Departments where cases have been reported, and 19 that have had deaths. The stricken communities number 237. Marseilles has had 1,733 deaths; Toulon, 982; Arles, 383; Perpignan, 186; Aix, 162; and Carcassonne, 106. The disease has nearly disappeared from France and Spain, and it continues to abate in Italy.

The total number of fresh cases in Italy, September 29th, was 355, with 212 deaths. This includes 171 cases and 100 deaths at Naples.

A cablegram from Paris, September 30th, states: "The cholera commission appointed to investigate the epidemic here have submitted their report. They state that they followed the progress of the disease by hourly examining the blood of persons stricken with it. They found that in each case at first a few of the globules presented an unhealthy appearance, then one-third were affected, then one-half, then two-thirds, and finally death resulted. The important fact was developed that all the globules were not simultaneously affected."

The American Academy of Medicine.—The Ninth Annual Meeting of the Academy will be held at the Johns Hopkins University, Baltimore, Md., on Tuesday and Wednesday, October 28th and 29th, beginning on Tuesday, at three o'clock P.M. The address of the President, Dr. Benjamin Lee, of Philadelphia, will be delivered at eight o'clock P.M. Papers will be read by Dr. N. Allen, of Lowell, Mass., on "Physiology in its more Public Relations (public health, physical culture, family institutions, true civilization)"; Dr. H. O. Marcy, of Boston, Mass., on "The Rôle of Bacteria in Infectious Diseases"; Dr. R. Stansbury Sutton, of Pittsburg, on "The Teachings Derived from Observations in One Hundred and Thirty-seven Abdominal Sections"; Dr. H. Knapp, of New York, on "Statistics of Glaucoma"; Dr. A. L. Gihon, U. S. Navy, on "The Trade Aspect of Medicine"; Dr. E. Jackson, of Philadelphia, on "The Examination of Applicants for Licence to Practice, a Means of Raising the Standard of Medical Education"; Dr. A. C. Kemper, of Cincinnati, O., on "Medical Fees"; Dr. V. P. Gibney, of New York, on "Some Comparative Results of Treatment of Chronic Articular Osteitis of the Hip"; Dr. C. C. Bombaugh, of Baltimore, Md., on "The Place of the Physician in Literature"; Dr. Peter D. Keyser, of Philadelphia, on "The Relation of the Medical Colleges to Preliminary Education"; Dr. A. D. Rockwell, of New York, on "The Induction Coil, its Varieties and the Differential Indications for their Use"; Drs. Dunglison and Marcy, "Report on Laws Regulating the Practice of Medicine in the United States and Canada."

The Comma-Bacillus found in the Mouth and Fauces of Healthy Persons.—Dr. T. R. Lewis, of the British Army, has been studying the microscopical appearances in cholera at Marseilles. He states that he finds the comma-bacillus in all cases, but that he has also found this bacillus in the mouth and fauces of healthy individuals. Although Dr. Lewis regards this fact as one of great significance, it cannot be so regarded as yet, since he did not test the oral microorganisms by cultivation.

Collective Investigation in Connecticut.—We have received a circular from the "Committee on Matters of Professional Interest in the State," in which is presented a plan for collective investigation among the members of the State Society. The subjects chosen for investigation are: convallaria maialis, piscidia erythrina, cascara sagrada, and the oleates. A list of questions under each head is furnished, and the members are each urged to do whatever is possible to promote the success of the investigation.

Dr. Alexander H. Stephens and Sir James Paget.—In an address delivered before the New York State Medical Society at Albany, in 1850, we believe, Dr. Alexander H. Stephens, President, gave a very similar series of facts and line of reasoning regarding the cost of sickness and disease that Sir James Paget did in his much-quoted address at the Healtheries. Dr. Stephens' address was not "much-quoted" however. Times were not then ripe.

The New York Post-Graduate Medical School and Hospital opened its Session of 1884–85 on October 1st, in its new and spacious building, where, during the summer, many changes have been made to add to the comfort of the physicians who attend the clinics. The building is four stories high, has a frontage of ninety feet, and has a large yard, in which is the well-ventilated building for the teaching of operative surgery, regional anatomy, and the like. In the basement is found the pharmacy and patients' waiting-room; on the first floor the amphitheatre, comfortable and light, for surgical, gynecological, ophthalmic, and other operations, and for the various clinics; also a second lecture-room for orthopedic surgery, and instruction in naval, military, and State hygiene; together with eight other rooms for the treatment of patients, and the reading-room, well supplied with medical journals. On the second floor is the large room for laryngoscopy, ophthalmoscopy, and otoscopy, with facilities for teaching thirty at once, if necessary. The new histological and pathological laboratory is also most thoroughly equipped, and contains one of the largest collections of specimens in this country. A photographic gallery for taking pictures of important cases is a new feature. The two upper floors are devoted to hospital purposes, where private patients are treated,

either in separate rooms or in a general ward, recently opened. Some of the private rooms are marvels of beauty. During the last session one hundred and eighteen physicians studied at the School, and the present demand for post-graduate instruction is on the increase. During the winter clinics will be given on the following topics: Surgery, Clinical and Operative; Gynecology; Venereal Diseases; Diseases of the Eye and Ear; Physical Diagnosis; General Medicine; Diseases of Children; Urinary Analysis; Surgical Dressings; Obstetrics; Applied Anatomy; Diseases of the Nervous System; Orthopedic Surgery; Diseases of the Nose and Throat; Skin Diseases; Pathology and Histology; Hygiene; Pharmacy; Anatomy and Physiology of the Nervous System; and Genito-urinary Diseases.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from September 21 to September 27, 1884.

MIDDLETON, PASSMORE, Major and Surgeon. Having reported from sick leave of absence, assigned to duty at Fort Leavenworth, Kan. S. O. 188, par. 2, Headquarters Department of Missouri, September 19, 1884.

WHITE, R. H., Captain and Assistant Surgeon. Assigned to duty as Post Surgeon at Fort Winfield Scott, Cal., relieving Assistant Surgeon A. S. Polhemus, who, upon being relieved will report to commanding officer Alcatraz Island, Cal., for duty. S. O. 113, par. 1, Headquarters Department of California, September 19, 1884.

HALL, JOHN D., Captain and Assistant Surgeon. Assigned to duty at Fort Townsend, Wash. Ter., to relieve Surgeon R. S. Vickery. Surgeon Vickery on being relieved directed to report to commanding officer Vancouver Barracks, Wash. Ter., for duty. S. O. 140, par. 3, Headquarters Department of Colorado, September 15, 1884.

TESSON, L. S., Captain and Assistant Surgeon. Directed to report to commanding officer Fort Stockton, Texas, for temporary duty. S. O. 127, par. 3, Headquarters Department of Texas, September 22, 1884.

BIRMINGHAM, H. P., First Lieutenant and Assistant Surgeon. Leave of absence extended twenty days. S. O. 116, par. 2, Headquarters Division of the Missouri, September 22, 1884.

MADDOX, T. J. C., First Lieutenant and Assistant Surgeon. Directed to report to commanding officer post of San Antonio, Texas, for duty. S. O. 127, par. 5, Headquarters Department of Texas, September 22, 1884.

BARROWS, C. C., First Lieutenant and Assistant Surgeon. Leave of absence extended one month. S. O. 97, par. 6, Headquarters Division of the Pacific, September 19, 1884.

DIETZ, W. D., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Selden, N. M. (Post Surgeon). S. O. 187, par. 4, Headquarters Department of Missouri, September 18, 1884.

MCCAW, W. D., First Lieutenant and Assistant Surgeon. Assigned to duty as Post Surgeon, Fort Craig, N. M. S. O. 187, par. 5, Headquarters Department of Missouri, September 18, 1884.

Official List of Changes in the Medical Corps of the U. S. Navy, during the week ending September 27, 1884.

BLOODGOOD, D., Medical Inspector. To Washington for examination preliminary to promotion, and as to qualifications for sea duty, October 1, 1884.

HORD, W. T., Medical Director. As member of Naval Examining Board, October 1, 1884.

TURNER, T. J., Medical Director. As member of Naval Examining Board, October 1, 1884.

BOYD, J. C., Passed Assistant Surgeon. Placed on waiting orders, September 25, 1884.

OBERLY, A. S., Surgeon. To Washington for examination preliminary to promotion, and as to qualifications for sea duty, October 1, 1884.

Reports of Societies.

AMERICAN GYNECOLOGICAL SOCIETY.

Ninth Annual Meeting, held in Chicago, September 30, October 1 and 2, 1884.

(By Telegraph to THE MEDICAL RECORD.)

TUESDAY, SEPTEMBER 30TH—FIRST DAY—MORNING SESSION.

THE Society was called to order by the President, DR. ALBERT H. SMITH, of Philadelphia.

DR. W. H. BYFORD, of Chicago, gave the address of welcome.

DR. JOHN C. REEVE, of Dayton, O., read a paper on

INVERSION OF THE UTERUS.

The following points wer among those upon which opinions were divided:

First.—Could inversion of the uterus occur entirely independent of pregnancy or polypus, or even in a nulliparous organ? There was a fair argument in favor of the proposition that it might so occur, and some cases seemed to prove it.

Second.—Did inversion of the uterus always begin at the fundus uteri? There seemed sufficient data to establish the proposition that inversion could begin at the cervix.

Third.—Did puerperal inversion of the uterus ever occur except at or immediately after delivery? Testimony rendered argument in its support unnecessary; several cases were mentioned which sustained the proposition.

Fourth.—Might inversions of the uterus take place without sufficient symptoms to attract attention or to indicate that anything had gone wrong? Cases were cited which sustained the affirmative of the proposition.

The paper was discussed by Drs. John Scott, of San Francisco; W. H. Byford, of Chicago; B. B. Browne, of Baltimore; A. Dunlap, of Sprinfigeld, O.; E. W. Sawyer, of Chicago; and W. T. Howard, of Baltimore.

DR. H. P. C. WILSON, of Baltimore, read a paper on

FOREIGN BODIES IN THE ABDOMEN AFTER LAPAROTOMY.

He had been unsuccessful in gathering statistics but had succeeded in collecting twenty-one cases. Of these only five had been published. Six occurred in this country, fifteen in Europe. In six American cases sponges were left in five, and forceps in the remaining one. Dr. Wilson gave a history of his case, that of a woman five months in pregnancy, upon whom he performed ovariotomy. Abortion occurred eighteen days after the operation. A sponge remained in the abdominal cavity five months; it was then discharged piecemeal through the abdominal walls, and the patient recovered completely.

The paper was discussed by DR. THOMAS, of New York. He said he was in the habit of attaching long pieces of tape to each sponge to prevent its loss in the abdomen. He had never had an accident occur to himself except once in four or five hundred laparotomies, and then a piece of sponge was found post-mortem, only a few hours after operation.

DR. A. REEVES JACKSON, of Chicago, knew of three unpublished cases, two in which sponge, and one in which forceps had been left in the abdomen. To pre-

vent accident he used a list of instruments and sponges, and compared the count after operations.

Dr. John C. Reeve, of Dayton, O., mentioned that Wilson used antiseptic sponges.

Dr. Dunlap, of Springfield, O., used few instruments and sponges, and allowed no one to put the hand in the abdomen except himself. He made the incision large so as to allow inspection, and used large sponges.

The discussion was continued by Drs. Howard, of Baltimore; Engelmann, of St. Louis; Mundé, of New York; Baker, of Boston; and was closed by Dr. Wilson, who stated that, from discussion and from one case learned otherwise, he could add seven to those reported in his paper; making a total of twenty-eight.

Tuesday, September 20th—First Day—Afternoon Session.

The Society was called to order at three o'clock by the President.

Dr. C. D. Palmer, of Cincinnati, O., read a paper on

ABDOMINAL SECTION—ITS VALUE AND RANGE OF APPLICATION AS A MEANS OF DIAGNOSIS AND TREATMENT.

In no class of diseases were there greater difficulties in diagnosis to be encountered than in certain pelvic and abdominal affections of women. Great stress had been laid upon the value of tapping as a diagnostic means. Probably the middle ground of favor occupied by most gynecologists was the correct one. But had not the importance of tapping as a means of diagnosis been exaggerated? The advantages offered by the plan were mentioned, and then reference was made to the immense damage that indiscriminate tapping had done. Tapping should be omitted if a diagnosis could be established without it, or some other equally risky procedure. The author of the paper would not assume the extreme position against it, but from experience we were justified in contending that tapping, in a large proportion of cases, in which it had usually been practised, was unnecessary and superfluous; for diagnosis, exploratory section was the only means in our possession to accurately determine certain diseases and conditions of the pelvis and abdomen. After referring to the views of Tait, Bird, Atlee, Kœberle, Spencer Wells, C. C. Lee, and his own experience, Dr. Palmer gave the general proposition that abdominal section was not dangerous in most cases, in which it appears justifiable. That

THE RISK OF PURE ABDOMINAL SECTION FOR DIAGNOSIS, EXCEPT IN MALIGNANT DISEASES, IS LESS THAN MIGHT BE EXPECTED.

In a group of cases the mortality would be heavier than in completed operations. Tait well remarked that the surgeon should most carefully consider what he was about to do before he turned an exploratory incision into an incomplete operation. Generally speaking, in all seriously doubtful and obscure cases of abdominal and pelvic disease, after other methods of exploration had failed, and when there were severe and threatening symptoms with urgent indications for relief, the abdomen might, or should be, opened. The diseases in which it might be resorted to were: First, ovarian tumors; second, certain interstitial and extra-uterine fibroids; third, certain cases of acute and chronic peritonitis; fourth, intestinal obstruction; fifth, chronic pelvic abscess; sixth, extra-uterine pregnancy. These explorative incisions should be performed antiseptically.

Dr. Engelmann, of St. Louis, thought that exploratory section had been practised too little in this country as a means of diagnosis. He regarded it as far more safe, and certainly more satisfactory, than tapping.

Dr. Mundé, of New York, regarded exploratory incision, in the majority of cases, as rather a safe procedure. In pelvic abscess he would first aspirate, and, finding pus, make a free incision.

Dr. Wilson, of Baltimore, regarded every ovariotomy as an exploratory incision, because it was very rare that the operator knew when he cut into the abdomen exactly what he would find.

The discussion was continued by Drs. Maury, of Memphis; Jackson, of Chicago; Scott, of San Francisco; and closed by Dr. Palmer.

Dr. P. F. Mundé, of New York, read a paper entitled

CERVICAL FIBROIDS AS A CAUSE OF DYSTOCIA, AND THEIR REMOVAL BY VAGINAL ENUCLEATION.

The paper was accompanied by specimens. It contained comments concerning the frequency of the occurrence of cervical fibroids, being much less frequent than tumors situated in the body of the uterus. A *résumé* of the literature of the subject, and a history of the case under his own care was related, in which a tumor weighing three pounds was removed by enucleation from the anterior lip and a portion of the body of the uterus of a woman thirty-eight years old, the mother of seven children. The patient recovered, and when discharged from the hospital nothing but thickening of the anterior lip of the cervix remained.

The meeting then adjourned to Wednesday morning.

The following were the members present: Drs. Baker, of Boston; Browne, of Baltimore; Byford, of Chicago; Dunlap, of Springfield, O.; Engelmann, of St. Louis; Foster, of New York; Howard, of Baltimore; Jackson, of Chicago; Jenks, of Detroit; Maury, of Memphis; Reeves, of Dayton, O.; Sawyer, of Chicago; Scott, of San Francisco; Smith, of Philadelphia; Vandewarker, of Syracuse; Wilson, of Baltimore; Johnson, of Washington; Mundé, of New York; Richardson, of Boston; Thomas, of New York.

Invited guests: Drs. E. C. Dudley, W. E. Clark, F. P. Seeley, N. S. Davis, of Chicago; P. McClure, of Dubuque; H. G. Dearborn, of Nashua, N. H.; J. H. Carstens, of Detroit; T. B. Harvey, of Indianapolis; Fritz Netzler, of Stockholm; F. Woodbury, of Philadelphia; and Wesley M. Carpenter, of New York.

A banquet was given by the Chicago Gynecological Society on Tuesday evening at the Palmer House.

Wednesday, October 1st—Second Day—Morning Session.

The Society was called to order by Dr. W. H. Byford, of Chicago.

The following gentlemen were made members by invitation: Drs. W. H. Meyers, Fort Wayne; J. H. Ranch, Springfield, O.; J. K. Bartlett, Milwaukee; Liston H. Montgomery, Chicago; T. A. Roger, Montreal; William Fox, Milwaukee.

DISCUSSION ON DR. MUNDÉ'S PAPER.

Dr. Jenks, of Detroit, reported a case in which a small cervical fibroid was present at labor, and which he enucleated without difficulty, and labor proceeded without interruption. He favored enucleation, although he was a believer in Cæsarean section if performed before the woman becomes exhausted.

Dr. Byford, of Chicago, said his practice had been, whatever was the size of the tumor, whether sessile or pedunculated, to wait until labor began, believing that these tumors can be removed as easily at that time as at any other. Thus the danger of producing miscarriage, and consequently sacrificing the child, was avoided; besides, in many of these cases the tumor was pushed before the head and delivery completed without injury to the child.

The discussion was continued by Drs. Wilson, of Baltimore; Dunlap, of Springfield, O.; Van De Warker, of Syracuse; Reamy, of Cincinnati; and closed by Dr. Mundé.

Dr. T. Gaillard Thomas, of New York, read a paper on

EXTRA-UTERINE PREGNANCY, WITH REPORT OF SIX CASES.

It was supplementary to a report made two years ago. Notwithstanding the great advance made concerning

early and certain diagnosis, it was far from easy. The dictum of Depaul, however, that diagnosis at third or fourth month was impossible, must be disregarded. Reference was made to experiments performed on rabbits by Leopold, who introduced fœtal rabbits after performing laparotomy and studied the changes which followed. They had a direct and favorable bearing on destruction of the fœtus by means of the galvanic current. Leopold also believed that recovery of patients after rupture of the Fallopian tube was much more common than generally supposed, a position which Dr. Thomas fully endorsed. Dr. Stephen Rogers, of New York, twenty years ago advocated laparotomy and application of ligatures for control of hemorrhage from rupture of blood-vessels with extra-uterine pregnancy, but had no experience in the plan of treatment. Lawson Tait, in January, 1883, operated under these circumstances, and in 1884 in four additional cases, with four recoveries in all. Dr. Charles K. Briddon, of New York, followed Tait, in October, 1883, and the history of the case was incorporated in his paper. Dr. Thomas' conclusion upon this point was that neglect to perform laparotomy under such circumstances would be criminal. The author of the paper then gave detailed histories of six additional cases of extra-uterine pregnancy treated with the galvanic current.

The paper was discussed by Drs. Mundé, of New York; Harvey, of Indianapolis; Palmer, of Cincinnati; Wilson, of Baltimore; Howard, of Baltimore; Baker, of Boston; and Reamy, of Cincinnati.

Dr. R. B. Maury, of Memphis, read a paper entitled

CASE OF TUBAL PREGNANCY WITH RUPTURE OF THE SAC AND REMARKS CONCERNING THE PROPRIETY OF LAPAROTOMY.

The case was one of ruptured perineum with rectocele cured by the usual operations, and followed by pregnancy in which there developed suddenly evidence of rupture of the sac of extra-uterine pregnancy, diagnosticated to be of the tubal variety. The patient recovered. After referring to the views of Tait, Thomas, and others, Dr. Maury submitted that even under perfect surgical methods, we may never hope, as a rule, to obtain satisfactory results from immediate laparotomy, and at this time it would seem to be more in accordance with sound surgical principles to postpone all consideration of laparotomy until the period of shock had passed away.

Wednesday, October 1st—Second Day—Afternoon Session.

The Society was called to order by Dr. Jackson, of Chicago.

Dr. Christian Fenger, of Chicago, was made a member by invitation.

Dr. P. F. Mundé read a paper entitled

LIMITS OF VAGINAL HYSTERECTOMY FOR CANCER.

It was essentially a rejoinder to a paper by Dr. Jackson, of Chicago, read at the meeting last year, in which the conclusions were reached, *first*, that a diagnosis of uterine cancer could not be made sufficiently early to insure its complete removal by extirpation of the uterus; *second* that when a diagnosis could be made there was no reasonable hope for a radical cure, and other methods of treatment for ameliorating suffering or retarding the progress of the disease, and prolonging life, were equally effectual; *third*, that extirpation of a cancerous uterus was a dangerous operation. The author reported two cases and exhibited specimens. He then discussed the propositions made by Jackson from a clinical and statistical point of view, and reached substantially the following conclusions concerning the precise conditions in which alone operation seems justifiable: *first*, absolute limitation of the cancerous disease to the uterus; *second*, the probability of a complete removal of the disease by high supravaginal amputation and cautery, questionable; *third*, cancer or sarcoma of the body of the uterus; *fourth*, perfect freedom of motion of the uterus; *fifth*, capacious vagina; *sixth*, sufficiently vigorous condition of the general system. What he wished to accomplish by the paper was to protest against wholesale condemnation of a perfectly radical surgical measure on the more or less theoretical ground that it is too dangerous and not sufficiently beneficial, when facts, as shown by statistics, prove to the contrary, and to claim for the operation certain justification.

Dr. Jackson, of Chicago, maintained that surgical procedure, to be justifiable, should alleviate suffering and prolong life. The operation under consideration did neither of these, and therefore was unjustifiable without regard to special cases.

Dr. Van De Warker, of Syracuse, said the question was not how many died and how many recovered after operation, but was there any better way to reach the same result? He believed there were other methods which were safer and equally as competent as the use of the knife.

Dr. Engelmann, of St. Louis, argued in favor of operation, and claimed that the success already obtained warranted its continuation until more fully tested.

Dr. Palmer, of Cincinnati, thought that vagnial hysterectomy was not applicable in cases in which cancer had its starting-point in the cervix.

Dr. Baker, of Boston, sustained the operation as justifiable.

Dr. Scott, of San Francisco, thought young fellows were arranged upon one side and old fellows upon the other.

Dr. Reamy, of Cincinnati, thought statistics did not prove, nor did the paper prove, that operation prolonged life or cured the disease, or from a clinical standard that it was justifiable.

The discussion was continued by Dr. Ferger, of Chicago, and closed by Dr. Mundé.

The Society then adjourned to Thursday morning.

Thursday, October 2d—Third Day—Morning Session.

The delivery of the President's address on the present aspect of the puerperal diseases was postponed on account of the sickness of the President.

Dr. Edward Sawyer, of Chicago, read a paper on "Occipito-posterior Position in Vertex Labors." A paper was also read on "Rare and Fatal Form of Sepsis without Symptoms," by Dr. G. J. Engelmann, of St. Louis.

PAPERS READ BY TITLE:

"Hygiene of Pregnancy," by Dr. S. C. Busey, of Washington; "Rapid Dilation of Cervical Canal," by Dr. William Goodell, of Philadelphia; "Physiognomy of Vulva a Sequence of Anal Disease," by Dr. Isaac E. Taylor, of New York; "Early History of the Treatment of Vesico-Vaginal Fistula in the United States," by Dr. Nathan Bozeman, of New York; "Periodical Symptoms in Uterine Disease," by Dr. G. J. Engelmann, of St. Louis; "Topography and Sectional Anatomy of the Female Pelvis," by D. B. Hart, of Edinburgh; "Fibro-Myomata of the Uterus," by Dr. R. S. Sutton, of Pittsburg.

The following officers were elected: *President*—William T. Howard, Baltimore, Md.; *Vice-Presidents*—W. L. Richardson, Boston, Mass., and Paul F. Mundé, New York; *Secretary*—Frank P. Foster, New York; *Treasurer*—Matthew D. Mann, Buffalo, N. Y.; *Members of Council*—A. Reeves Jackson, Chicago, Ill.; H. P. C. Wilson, Baltimore, Md.; Joseph Tabor Johnson, Washington, D. C.; Ely Van De Warker, Syracuse, N. Y.

The next meeting will take place at Washington, D. C., on the third Tuesday in September, 1885.

THE HOSPITALS MEDICAL SOCIETY OF PARIS.

Stated Meeting, July 25, 1884.

M. Bucquoy, President, in the Chair.

(Special Report for The Medical Record.)

The Society having been called to order by the President, M. Martineau rose to state his views upon the relations of

SYPHILIS AND CHOLERA,

and the influence exerted upon the latter by the former affection. It had been asserted that the mercury given in the treatment of syphilis, especially the biniodide of mercury, acted also as one of the best prophylactics against cholera. The speaker opposed this view, and stated that of nine fatal cases of cholera occurring during the epidemic of 1849 in the Hôpital de Lourcine, eight of the patients were under treatment for syphilis. A similar experience obtained in 1866. At that time two wards were devoted to the reception of cholera patients, but the disease spread throughout the hospital and attacked by preference the syphilitics.

M. Dujardin-Beaumetz had observed the same untoward results in the case of

SYPHILIS AND TYPHOID FEVER.

It had become a common saying in the Hôpital Cochin that a patient in the early stage of syphilis, if attacked by typhoid fever, was a doomed man. Thus the mercury was seen to fail likewise in this disease. It was true, as stated by Miquel, that the biniodide of mercury was a most powerful disinfectant. But it was very unsafe to reason that, because a certain drug acted as a microbicide in the test-tube, it would act similarly in the human organism.

M. Bucquoy agreed with the last speaker as to the gravity of typhoid fever when it attacked a patient already suffering from syphilis.

M. Damaschino recalled several fatal cases of cholera occurring in syphilitic patients during the epidemic of 1866.

M. Féréol regarded syphilis and cholera as a combination of great gravity, but could not entirely agree with the last speakers as regards the evil influence of syphilis upon the course of typhoid fever. He had seen a number of cases of this kind in which recovery took place.

M. Vallin exhibited a

CHAMBERLAND'S WATER FILTER

made after the model of that used by Pasteur in his laboratory. Two cylinders are placed one within the other, the inner one being made of porcelain and being the filter proper. A pressure of one atmosphere and a half was necessary to force the water through the sides of the cylinder. The water was cleared absolutely of all suspended matters. The filter could be readily taken apart and purified by passing the inner cylinder through a flame.

M. Gérin-Roze thought the objection to such a filter was that it removed the suspended particles, but not the matters held in solution. He preferred a charcoal filter, even though it might be a little more complicated and difficult to cleanse.

M. Dujardin-Beaumetz presented a young man in whom there was a

TRANSPOSITION OF THE VISCERA.

The patient had had a pleurisy with effusion, and the heart-sounds were heard on the right side. But after the pleurisy was cured the heart still remained on this side, and it was then that the fact of the transposition of the viscera was noted.

M. Bucquoy had observed a similar state of affairs in a woman. In this case the patient herself called attention to the fact that her liver was on the left side.

M. Damaschino presented a communication on the

DISTOMA HÆMATOBIUM

offered by a physician of Alexandria. The microscopical preparations which accompanied the paper were from cases of distoma of the liver and of the kidneys.

M. Dujardin-Beaumetz then read a paper on the

DIAGNOSIS OF CANCER OF THE STOMACH.

His object was to call attention especially to the difficulties of a correct diagnosis. There was indeed no certain pathognomonic symptom of carcinoma of the stomach. In the first place, we are usually unable to determine the exact nature of any internal tumor. Histology has given us a very complete list of the various forms of cancer, but clinically we can make no such fine distinctions.

It has been asserted that the duration of carcinoma is shorter than is that of other chronic affections of the stomach, three years being given as the maximum. But while this might be true of some varieties of cancer, it was not so of all. The author recalled one case of undoubted carcinoma, as proved by autopsy, in which the earliest symptoms preceded death by twelve years. It might be objected that the case was one of cancer following ulcer of the stomach, and that the earlier symptoms were those of the latter affection. Such an assumption was, however, gratuitous, and, besides, the author had seen other cases in which the duration, though shorter than in the instance just cited, yet exceeded greatly that usually set down for carcinoma.

The diagnosis between cancer and dilatation of the stomach was a matter of considerable difficulty. As regards sex, men are more subject to cancer, and so they are to dilatation. Both affections are met with usually at about the age of forty years. Quesnel's assertion, that every cachectic person suffering from a chronic affection of the stomach has carcinoma, cannot be maintained. And even painful œdema of the legs, regarded by Trousseau as characteristic of cancer, may occur with simple dilatation. Pain is not a symptom of any great value, for although it usually exists it may also be absent. The vomiting of coffee-ground matters, formerly regarded as pathognomonic of cancer, may occur in dilatation, and is therefore a sign of no exceeding value. Even the existence of a tumor may be misleading, for a thickening of the stomach walls may occur in dilatation and may be mistaken for cancer. If, however, the tumor be well defined and lobulated, the diagnosis of cancer is rendered fairly certain. The German method of setting free a large quantity of gas in the stomach, the author considered to be practically of no value in diagnosis. It has been asserted that in the case of cancer the hydrochloric acid is wanting in the gastric juice, but this is equally inapplicable and valueless in practice.

M. Romelare, of Brussels, had noted a fact which M. Dujardin-Beaumetz thought might prove useful in this connection. He had found that in cancerous affections of the stomach and liver the amount of urea excreted was reduced to an average of 120 grains, and never exceeded 150 grains in the twenty-four hours. In the case of ulcer of the stomach, on the other hand, the amount of urea ranged from 250 to 500 grains, and never fell below 225 grains per diem. The author had verified these conclusions in a general way, yet they were not entirely reliable as a means of diagnosis. He had had a patient in whom the daily amount of urea excreted was but 45 grains, and had therefore concluded that the disease was cancer, but found at the autopsy that the tumor was an hydatid cyst. There was still another procedure which might be of assistance in establishing a diagnosis. He had procured an amelioration, and even a temporary lull, in the symptoms by regular and methodical washing out of the stomach in the case of carcinoma. In the case of dilatation, however, no improvement was obtained by this practice.

Upon the conclusion of this paper the Society adjourned.

THE THERAPEUTICAL SOCIETY OF PARIS.

Stated Meeting, July 23, 1884.

M. DELPECH, PRESIDENT, IN THE CHAIR.

(Special Report for THE MEDICAL RECORD.)

WHEN the Society had been called to order there arose a short

DISCUSSION ON ANTISEPTICS.

M. DUJARDIN-BEAUMETZ thought that the toxic nature of any substance should be considered as well as its antiseptic powers. A drug might be a perfect microbicide, but might also be practically useless because of its strongly poisonous qualities. The best antiseptic was undoubtedly that which was the least harmful to man in the dose required for asepsis. He regarded boracic acid and borax as the best microbicides for internal use that we possessed, as they combined at the same time a high degree of antiseptic power with an almost complete absence of injurious properties to the human subject.

M. BRÉMOND spoke in glowing terms of

OZONE

as the best disinfectant of the air in sleeping apartments and other enclosed spaces. A sufficient quantity of this substance may be produced with great ease by using a spray of spirits of turpentine.

M. LIMOUSIN stated that by making a mixture of permanganate of potash and bisulphate of potash and exposing it to the action of damp air we could obtain a constant formation of ozone. The making of ozone by pouring sulphuric acid upon the permanganate of potash was liable to cause an explosion, especially if a closed flask were used. The mixture recommended by him was free from danger of this kind. When ozone was prepared by means of the electric spark, an odor was noticeable which was absent when the permanganate and the bisulphate of potash were used, yet the substance was undoubtedly obtained equally well by the latter method.

M. DUJARDIN-BEAUMETZ gave the substance of a communication which he had presented to the Bureau of Hygiene on the best method of preparing

A DRINK FOR SCHOOL-CHILDREN DURING THE HOT WEATHER.

A beverage of this kind should be healthful, cheap, and at the same time not very pleasant to the taste, as it might then be consumed in too large quantities. These qualities were possessed by a liquid containing gentian or quassia, licorice, mint, sugar, and citric acid. Its preparation cost about a cent a quart.

M. CAMPARDON said that thirst might be easily assuaged by chewing shavings of quassia wood occasionally.

M. BLONDEAU made a statement concerning the value of

SULPHURIC ACID IN CHOLERA.

He said that during the last epidemic in England very general use was made in some places of sulphuric acid lemonade flavored with tincture of orange peel, and not one of those who took this regularly was attacked by cholera.

M. LIMOUSIN said that there were several chemically incompatible formulæ published by the Bureau of Hygiene. Sweet and bitter substances were added to acids and alkalies in a hap-hazard sort of way. It would seem as though such mixtures ought to be useless. Yet if, in practice, the desired result is obtained, we ought to be satisfied.

M. BUCQUOY regretted to hear the use of boiled water recommended. This was not healthful and was liable to cause digestive troubles.

M. DUJARDIN-BEAUMETZ said that the boiled water could be recharged with air by shaking it, but it was evident that in this process it would also become charged with the germs floating in the atmosphere.

This was the last meeting of the Society before the summer vacation, but the President announced that special meetings would be called from time to time, if events of importance requiring discussion should arise. The Society then adjourned subject to the call of the President.

THE SURGICAL SOCIETY OF PARIS.

Stated Meeting, July 23, 1884.

M. MARC SÉE, PRESIDENT, IN THE CHAIR.

(Special Report for THE MEDICAL RECORD.)

THE Society having been called to order by the President, M. MONOD recalled a paper, read at the last meeting, on exostoses of the frontal sinus, and related an instance in which an

OSSEOUS CYST OF THE FRONTAL SINUS

had been taken for an exostosis. Dr. Rouge, thinking that such was the case, cut down upon it and was surprised to find himself in a cavity with very thick bony walls, at the bottom of which was a little tumor about the size of a cherry. The tumor was not disturbed, and had not increased any in size in the fourteen years which had since elapsed.

M. TRÉLAT requested that further details of this case be obtained, so that a certain diagnosis might be established.

M. CHAUVEL then read a report upon a monograph of Dr. Poulet on the subject of

TUBERCULAR AND SYPHILITIC OSTEITES OF THE SKULL.

The author passed briefly in review the subject of simple traumatic osteitis, the characters of which it is easy to reproduce experimentally in animals, and then took up the question of the specific forms of osteitis, especially the tubercular and the syphilitic. Although osseous tuberculosis is a common enough affection, tubercle of the cranial bones is, if one may judge from the number of reported cases, a very rare condition. M. Poulet, however, claimed to have found two instances of this disease among the specimens in the museum of Val-de-Grace, but the reporter took the liberty of doubting this until further proof should be forthcoming. The author endeavored to show that this affection was most truly specific, as well in its symptoms as in its pathological characteristics. The specific nature of the second variety of osteitis, the syphilitic, was incontestable. M. Poulet was able to show from a careful examination of numerous pathological specimens that the course of the disease was always the same. Starting from the pericranium, the gummy process invades the bone in the form of a spiral the turns of which become constantly larger. In the skull this spiral increases laterally like a watch-spring, while in the long bones of the extremities it increases in depth like a corkscrew. The border of this spiral is formed of very dense, eburnated bone. The monograph was accompanied with a number of well-executed designs showing the lesions referred to.

M. BOUILLY then read the history of a case of

PAROVARIAN CYST OF THE RIGHT SIDE

reported by Dr. Jeaunel. The patient, thirty-five years of age, in a good state of health, presented the signs of a monolocular cyst of the ovary. The aspirator was introduced and nearly sixty ounces of a perfectly clear fluid were withdrawn. Three months later a second operation was necessitated by reason of a reaccumulation of fluid. After aspiration of about seventy ounces of fluid, the sac was washed out with thirty ounces of a one per cent. carbolic acid solution. Then an injection of a warm solution of tincture of iodine and water, equal parts, was thrown into the cavity of the cyst. When nearly nineteen ounces of this mixture had been injected, the action of the aspirator was reversed in order to draw

the fluid back; but not a drop returned. At the same time the patient became unconscious, though very restless; the face was blue, the pulse at the wrist was almost imperceptible, and the body was covered with a sticky perspiration. The respirations were slow, irregular, and noisy. The woman was suffering most evidently from

ACUTE IODINE-POISONING.

The aspirator needle was withdrawn and reintroduced several times but no fluid could be drawn off. Numerous hypodermic injections of ether were made, mustard plasters were applied to the chest, and an electric battery of forty cells was employed. But the patient did not recover consciousness and the power of speech until thirty-five hours had elapsed. She then suffered from very marked symptoms of iodism in all the mucous membranes, the symptoms persisting for two weeks or more.

The author emphasized the fact, as shown by this case, that very grave accidents may follow an operation apparently so simple as this. He thought it would have been better for the patient had ovariotomy been performed in the first place. M. Bouilly agreed with him in this last conclusion, and remarked that this case proved that, contrary to the generally received opinion, parovarian cysts were not always cured by a single puncture.

M. Tillaux could not understand why the aspirator should be used in cases of this kind, for it only favored an arrest of the stream, as happened in this instance, by sucking the wall of the cyst against the point of the needle. He thought the amount of tincture of iodine injected (over nine ounces) was enormous. The formula that had been recommended for use in such injections was one part tincture of iodine to two parts of water.

M. Lucas Championière favored operation in the treatment of parovarian cysts. In the case cited by M. Jeannel, the patient had undergone a number of operations more serious in the aggregate than ovariotomy, and yet she was not radically cured.

M. Bouilly thought that the amount of iodine used was certainly too great, but he thought the symptoms were not those of poisoning, but were caused rather by the traumatism of the operative measures employed. He did not agree with the last speaker in his preference for ovariotomy. He thought it better to make one or two punctures at least before resorting to operation.

He then read another report on a paper by Dr. Leriche, entitled

THREE SUCCESSFUL OVARIOTOMIES.

In two of the cases the pedicle was fastened externally, instead of being abandoned in the abdominal cavities, as is usually done. He did not favor catgut for ligatures, as it could not be drawn tightly enough.

M. Tillaux had formerly used catgut, but had abandoned it for silk after having lost a patient from hemorrhage caused by the slipping of the ligature.

After some further discussion on the relative merits of catgut and carbolized silk, M. Verneuil related a case of

NASO-PHARYNGEAL POLYPUS.

The patient had been exhibited at a meeting of the Society four months ago. He was then suffering from an enormous recurrent tumor, the first operation (removal of the upper jaw) having been performed one year before. The tumor was exceedingly vascular, and a bruit was distinctly audible. The attempt was first made to treat it by means of irritant injections, but these were without result. It was then decided to tie the common carotid. This was easily done and was followed by reduction in size of the tumor, subsidence of inflammation, and relief from pain. A small abscess formed, however, at the point of incision, and was opened by M. Kirmisson, and a drainage-tube was inserted. The opening did not cicatrize, and six weeks after the ligation of the artery the patient had an attack of erysipelas. This was recovered from, but the wound began to slough, and a number of hemorrhages occurred from which the patient finally succumbed.

At the autopsy there was found to be perforation at the bottom of the sphenoidal fossa, through which a lobe of the tumor had passed into the cranial cavity. There had, however, never been any cerebral symptoms. The peripheral extremity of the carotid artery was completely occluded, but it required a long search before the string-like remains of the cardiac extremity could be found.

M. Trélat thought that palliative operations might lead to a perfect cure of naso-pharyngeal polypi, as many of these tumors underwent spontaneous disappearance in the course of time.

M. Lucas Championière said that, according to Lister, arteries should never be tied with silk, but with some substance which is capable of being absorbed in the tissues. The case just related emphasized the wisdom of this procedure, for no wound in which a silk ligature remains can be with absolute certainty aseptic.

M. Tillaux presented a patient upon whom he had performed

RESECTION OF THE SUPERIOR MAXILLA

on account of a sarcomatous tumor, the size of a small ostrich egg, filling the entire zygomatic fossa. The patient made an excellent recovery, and, by means of an apparatus made by M. Beauregard, could masticate with great ease.

The meeting then adjourned.

International Medical Congress.

EIGHTH SESSION.

Held at Copenhagen, Denmark, August 10–16, 1884.

REPORTS OF SECTIONS.

(Special Report for The Medical Record.)

SECTION ON OPHTHALMOLOGY.

Dr. Samelsohn, of Cologne, read a paper on the

PRACTICAL VALUE OF LIGHT SENSE IN OPHTHALMOLOGY.

If the examination of the light sense in practical ophthalmology has not hitherto met with the attention it undoubtedly deserves, it is from the want of an efficient mode of testing it. The methods hitherto in use depend on testing the vision either with diminishing or with constant illumination. The first method was much used by Förster, who formulated the law that the *light sense* is only impaired in affections of the percipient elements, while affections of the conducting elements are indicated rather by an increased sensibility for objective light. A large number of examinations made during the last two years have convinced the author that the law of Förster has only a very limited application.

Although disease of the percipient elements of the retina very often results in a considerable impairment of the light sense, yet the converse is not so often true that one can, from the fact of the light sense being impaired, diagnose a disease of the percipient elements. Indeed, inflammatory affections of the optic nerve cause so great a diminution of the light sense that in certain affections it amounts almost to torpor of the retina.

DESCRIPTION OF THE CONDITION IN CERTAIN FORMS OF DISEASE.

From this it is seen that the light sense is very much more affected than the quantitative color sense; the latter, on the contrary (as shown elsewhere), stands in the clearest numerical relation with the light sense. The testing of the light sense is useful for differential diagnosis under the following circumstances: (1) In certain forms of opacities of vitreous, which may be mistaken for detachment of the retina; (2) in differential diag-

nosis between simple glaucoma and optic atrophy; (3) as giving indication for diagnosis and prognosis in certain forms of cataract.

Prof. Schmidt-Rimpler, of Marburg, read a paper on

A NEW METHOD OF DETERMINING REFRACTION BY MEANS OF THE OPHTHALMOSCOPE.

In this method he did not make use of the image of the retina itself, but observed the image of the source of light (lamp) thrown upon the fundus, the same image that forms the object of investigation in so-called retinoscopy, except that in the latter no convex lens intervenes. The apparatus used in Professor Schmidt-Rimpler's method consists of a convex lens, from which an arm projects to keep it at such a distance from the observed eye that its focus and the first principal point of the eye coincide. A tape measure on the opposite side of the lens determines the distance of this lens from the concave ophthalmoscopic mirrors, from which data the distance between the principal focus of the lens and the inverted image of the source of light reflected from the concave mirrors is known. This distance, expressed in centimetres, gives the amount of ametropia in terms of a dioptric, myopia to the one side of the focus of the lens, and hypermetropia to the other. It was plain that if the eye examined were emmetropic, and its accommodation at rest, the best defined image of the source of light would be obtained when the focus of the concave mirror coincided with that of the convex lens, as it was at that point that the inverted aërial image of the fundus was situated. In myopia the focus of the concave mirror must lie nearer to the lens than the focal length of the lens, in order to obtain the best definition, and in hypermetropia it must lie further from the lens than the focus of the latter. When the lens was so placed that its focus coincided with the principal point of the eye, equal movements of the external source of light along the optic axis corresponded to equal differences of refraction in the observed eye. The strength of lens used was 10 D, and in that case every alteration in the refraction amounting to 1 D altered the position of the aërial image of the fundus 1 centimetre.

Dr. Noyes, of New York, did not rely entirely upon the ophthalmoscope; he always tried the use of glasses in confirming his diagnosis. He had a clip upon his own ophthalmoscope in which he could easily place a cylindrical lens for examining the fundus.

Mr. Berry, of Edinburgh, approved of Professor Schmidt-Rimpler's method because of the difficulty of testing by the direct method in *high degrees* of ametropia. He had found that the refraction of the eye was different at the yellow-spot and the optic disk regions.

Mr. Yuler, of London, said that he should be glad to become practically acquainted with Professor Schmidt-Rimpler's new method. With regard to the estimation of refraction by the direct method of ophthalmoscopic examination, he was of the same opinion as Mr. Berry and Dr. Noyes, viz., that in simple hypermetropia and myopia of low degree we were able to see the yellow-spot region, and so to estimate the refraction on the visual axis; but when astigmatism existed, the direct method failed because of the paucity of vessels in the yellow-spot region. He considered the shadow-test (retinoscopy) to be the best and most exact means of estimating the refraction in astigmatism, but this must be done only when the eye is fully atropised and the patient is looking straight at the observer's forehead. By this means the refraction of the visual axis could be accurately estimated.

Dr. Hansen Grut, Prof. Sattler, and Prof. Liebrecht also joined in the discussion, and Prof. Schmidt-Rimpler replied.

Dr. Edm. Hansen Grut, of Copenhagen, read a paper on

TWO FORMS OF KERATITIS.

1. The first form was bullous keratitis following traumatic abrasions of the corneal epithelium. The painful and transient attacks which come on sooner or later after an abrasion are well known. They have been wrongly called nervous. They are always occasioned by a mechanical cause, generally at the moment the patient awakes. This mechanical cause is the friction of the eyelid against the eye, owing to the moisture which comes during sleep, and the rubbing with the fingers by the patient, who fancies that there is a foreign body in his eye. The nerves of the epithelium remain in an unhealty condition—perhaps the regeneration of the epithelium is defective—despite the apparently normal appearance of the eye. A slight traumatism would suffice, then, to provoke a bad attack. Sometimes, and oftener than one thinks, it is real keratitis which takes place. This keratitis always returns to the bullous form. Most frequently the bulla is difficult to see directly, but can always be seen by withdrawing the anterior surface of the epithelium by means of iris forceps. The bulla is always extensive, in some cases occupying more than half the corneal surface. Bullous keratitis is not always allied to a glaucomatous condition, or to other serious affections of the eye.

In some cases there is a symmetrical eruption in the other eye, even, although there is absolute certainty that this eye has not been previously injured.

2. The second form was one of slow progress accompanied by very slight subjective symptoms, and having hardly any vascular injection. There is a slight grayish infiltration, difficult to see, having a tendency toward serpiginous increase. It spreads by slight projecting nodules, which are more densely infiltrated than the rest. The affection always remains superficial. Neither the deep layers of the cornea nor the iris are ever invaded. The affection is undoubtedly of mycotic origin.

On the 12th, Prof. Meyer presiding, Dr. Radard, of Paris, read an interesting paper on

THE TESTING OF VISION OF RAILWAY EMPLOYEES.

Dr. Liebrecht read a paper on the same subject, and a third was read by Dr. Fox, of Philadelphia, for Prof. William Thompson.

Prof. Sattler, of Erlangen, read a paper on our actual standpoint with regard to the conception of diseases of the conjunctiva and of

THE NATURE AND THERAPEUTICAL ACTION OF JEQUIRITY.

With regard to jequirity, Professor Sattler's experience was that the infusion of this drug was very beneficial in granular affections of the conjunctiva. In all cases he found the characteristic bacillus in the infusion used. In some cases lesions of the cornea were produced, especially by frequent repetitions of the process in rapid succession. For this reason he thought it not safe to use the drug in cases where the cornea was unaffected.

Dr. Benson, of Dublin, had used jequirity infusion in upward of fifty cases, and had found it very beneficial in granular conjunctivitis and pannus. In some cases he could find no trace of the bacillus in the infusion used.

Dr. E. Meyer, of Paris, read a paper on

THE ARTIFICIAL MATURATION OF CATARACT.

The chief points of his paper were as follows: The opacification of the whole of the lens substance, which alone admits of its complete expulsion, is a desideratum in the normal extraction of cataract. In cases where extraction of incomplete senile cataract is compulsory, this artificial maturation is indicated. The best known method of maturation is that of massage of the crystalline lens through the cornea (Förster) after the evacuation of the aqueous humor from the anterior chamber.

Iridectomy, he said, was of great importance. The pressure should be made with an instrument (shown) which made it general all over the cornea, and not localized. He showed a rabbit (living) in which he had produced cataract by this massage two days before, in the presence of several members of the section. The lens

of the rabbit was now quite opaque in the upper part, and partially so all over. There was no marked inflammation of the rabbit's eye. Professor Meyer was not prepared to state the exact pathological process by which this opacity was brought about.

Dr. Mooren, of Düsseldorf, criticized the operation; he had lost one eye by this method, and was less sanguine of its success than Dr. Meyer appeared to be.

Dr. Samelsohn, of Cologne, had tried it in a number of cases in some of which there were only cortical opacities. Some of his cases had succeeded, some not.

Dr. Abadie, of Paris, objected to the operation because of the difficulty of inducing patients to submit to so tedious a process.

Prof. Gayet, of Lyon, read a paper on the

RESULT OF GREAT LOSSES OF SUBSTANCE OF THE CORNEA.

The opening of large abscesses and the constant washing of them constitute a mode of treatment more advantageous, and for which one cannot be too grateful to those who have laid down the principle of it. Unfortunately, if the eye is permanently saved, it is not protected from progressive staphyloma, large adherent leucomas, synechia of the iris, and cataracts. Surgery has certainly preserved the organ, but for the most part it has preserved a useless organ, when it is not injurious, either through the pain it causes or from sympathy which it engenders. I think, with the help of certain facts, that it would perhaps be possible to substitute for the simple opening of the abscess a peripheral of the cornea with a large iridectomy.

Dr. Boucheron, of Paris, read a paper on

THE USE OF ATROPINE AT THE COMMENCEMENT OF CONVERGENT SQUINT.

The chief points of this paper were as follows: At the commencement of convergent strabismus the prolonged use of atropine in both eyes appeared to be the best means of treatment, because it counteracted the instinctive and excessive efforts at accommodation in a young ametropic child, in its first attempts at near vision. The amount of atropine used must be sufficient to cause paralysis of the accommodation and extreme dilatation of the pupil. Atropine was only efficacious during the period in which the strabismus was intermittent, that is to say, during the time when secondary retraction of the internal rectus was absent. This period was very short. A favorable condition to the cure by atropine is found in the rapid growth of the infant, especially in the development of the face, and more particularly the enlargement of the ethmoid bone, because such development brings about a separation of the orbital axis and a diminution in the strength of the convergent muscles.

The advantageous result of the atropine cure being applied from the commencement of convergent strabismus is caused by the rapid restoration of the eye from deviation, thus often saving it from becoming amblyopic. When it is, as we think, the consequence of an arrest in development of the macula after birth and consecutive to deviation of one of the eyes, electricity is often very useful. The correcting glasses for ametropia may be used at the same time, or after the atropine cure, to guard against any relapse. If "amblyopic exanopsia" has been avoided by using atropine and electricity, the bandage or the glasses are less frequently used. Tenotomy is always the best treatment for *permanent* squint.

Inconveniences from atropine—special intolerance, conjunctivitis—are very rare with young children; they are avoided by the use of the first remedies, and by changing the mydriatics when ill-supported. The myotics which contract the muscles of accommodation, in suppressing also the instinctive and exaggerated efforts of the accommodation equally produced, as he had already pointed out, very favorable results in the early squint, but the myotics appeared to him less active than the mydriatics.

Mr. Yuler, of London, thought there was much in the paper demanding the consideration of ophthalmic surgeons. With regard to the second point in Dr. Boucheron's paper, he had tried atropine in many cases of convergence, and while it had often succeeded in curing the intermitted cases, he had never once found it sufficient to remove a squint which had become permanent. He always corrected the ametropia at the time and before discontinuing the use of the atropine.

Dr. E. Hansen Grut read a paper on

LATENT STRABISMUS, ESPECIALLY LATENT DIVERGENCE.

Latent divergence is not *paresis*, neither is it muscular weakness. With just as little reason can it be attributed to increased power in the external recti. It depends on a defective impulse to convergence. The expression "loss of muscular power of internal recti" is erroneous, and does not express the true state of the case. It is the relation between convergence and accommodation which chiefly determines the latent condition of the covered eye. In order to estimate the latent position two things are absolutely necessary: 1, Accurate accommodation for the point of fixation; 2, an absolute condition of rest of the eye in looking at the distance.

Fusion is possible in spite of latent divergence. Usually correct fixation can be maintained, so that generally, even with very pronounced latent divergence, there is no convergence asthenopia if the power of fusion is good. A defective power of fusion renders difficult or prevents maintenance of exact position. In this case there is no effort which would lead to muscular fatigue, but diplopia. If there is good power of fusion, but great divergence in condition of absolute rest, an effort to converge is made, but by no means so often as is usually thought. Clinical experience alone can determine how often and when muscular asthenopia is present. The frequency of muscular asthenopia has become very great, and our means of diagnosing its presence are somewhat defective. In the first place the symptoms of muscular asthenopia are extremely variable, and not nearly as easy to classify as those of accommodative asthenopia. Numberless cases of nervous asthenopia are erroneously diagnosed as muscular. The relation between the available power of adduction and the degree of latent divergence is not sufficient to indicate whether muscular asthenopia is present or not. The same is true of exclusion of one eye during work and of the employment of prisms. The slight degrees of latent divergence (under 16°) cause muscular asthenopia, almost without exception. The most delicate tests for measuring accurately the *degree* of the latent divergence are uncertain, and are moreover superfluous.

An operation is only justifiable when there is more latent divergence in condition of absolute rest. The operation is, therefore, performed rather on account of latent absolute squint than for insufficiency. It is injurious to produce by this operation an absolute condition of *convergence* in the condition of rest, even though the power of abduction may still be sufficient to overcome the homonymous diplopia at the time.

Mr. Yuler, of London, gave demonstrations in the Section of Ophthalmology of

(1) FROST'S ARTIFICIAL EYE.

This is an excellent instrument for teaching purposes. It is provided with two movable retinæ, one of glass and the other painted so as to represent the normal fundus. By means of a delicate screw the eye can be shortened and lengthened so as to represent hypermetropia, emmetropia, and myopia, respectively, and by then adding a cylindrical glass to the front of this it becomes astigmatic. All the characteristic signs of emmetropia and ametropia can be clearly taught by this instrument.

(2) M'HARDY'S PERIMETER.

This is a self-registering instrument of excellent workmanship. It is self-registering and combines the proper-

ties of Förster's instrument. It is a decided improvement upon the perimeter shown at the London Congress by Stevens.

Both McHardy's perimeter and Frost's artificial eye can be obtained of Picard & Curry, London.

Dr. Noyes, of New York, read a paper on

ASTHENOPIA FROM INSUFFICIENCY OF THE EXTERNAL RECTI MUSCLES.

He spoke of the small degree of attention which had been given to this topic in text-books and in journals. While the varying degrees of accommodation appropriate to given amounts of convergence had been carefully studied by Donders and others, and that too in various states of refraction, there had been very little study of the degrees of muscular effort which belong to special amounts of accommodation. The latest and best contribution is by Bissinger under the auspices of Nagel, but this is brief and he confessedly leaves much to be done. In the study of asthenopia Dr. Noyes attempts to find the real conditions of muscular power, both with and without accommodation. He tests the adduction and abduction both for the working distance and for six metres. He does this in both regions with the glasses which the patient may require. He employs Graefe's equilibrium test in both regions, but he finds it of very uncertain value. Inasmuch as all the cases which he studied were asthenopic and therefore were in a pathological condition, he found that the relations between accommodation and convergence had been in many instances entirely disrupted. So frequently was this the case that he adopted the plan of resorting to atropine in very many cases, and in all those which were attended with severe pain. He found it necessary to do this to bring to view the real ability of the muscles in adduction and in abduction, and he was also obliged to wait in many instances for the mydriasis to subside before the ultimate and true status could be ascertained. It is rare that one examination will suffice. By a process both of analysis and of synthesis, that is of examining the functions separately and in combination with each other, he found that he could with greater certainty arrive at the truth. The mydriatic not only aided in making a diagnosis but was also a therapeutic measure.

Dr. Noyes had brought together 83 cases of asthenopia from insufficiency of the external recti. The largest number (viz., 30) were among hypermetropes, while emmetropes (viz., 20) came next in frequency, then cases of astigmatism (viz., 18), and lastly, 15 were myopes. A number of cases included in the report were found to consist essentially of spasm of accommodation, but this was associated with and in reality caused by debility of the externi. In all asthenopic cases Dr. Noyes looks for spasm of accommodation, and if it exist in notable degree this becomes an absolute indication for atropia to full paralysis of A.

What degree of deficient abduction, or what disproportion between abduction and adduction shall be accounted abnormal cannot be dogmatically asserted. The existence of pain in use of the eyes, not relieved by suitable glasses or by atropia, or by attending to other well-known concomitant conditions, was sufficient reason to resort to the local treatment which had been most often successful, viz., the employment of prisms with the bases outward, amounting as a total to three or six degrees, to be worn in most cases all the time, both for the distance and for the near.

Dr. Noyes clearly discriminated between the asthenopic cases in which the muscular trouble was entirely reflex and the product of remote disease, as of the uterus, lungs, etc., and those in which there was an idiopathic weakness of the muscles. In the former cases local measures were of minor value, while in the latter they were of notable advantage. There are also mixed cases which are both reflex and idiopathic. In only five cases was tenotomy performed—in four with entire success, in one without success.

A point to which Dr. Noyes called attention was the latent character of insufficiency of the externi, and especially to the fact that in some of the cases which proved by experience to be insufficiency of the externi, the evidence furnished by Graefe's equilibrium test pointed to insufficiency of the *interni*. He did not refer to myopic cases, but to other forms of ametropia and to emmetropia. In these relief was secured by wearing constantly, and both for near and far vision, *adductive* prisms, while in a very few cases abductive prisms were used for the near vision and adductive prisms for distance. These cases were noticed by Graefe and by many others since his time. They have divergence for the working distance, and convergence or perhaps equilibrium for the distance of six metres when examined by the equilibrium test. Some of them are truly cases of latent or manifest insufficiency of the externi, and if treated as such they recover. Dr. Noyes desired to call attention to this mode of regarding them, which had proved of great importance in his own experience, and which he believed would be found to be the solution of some difficult and not infrequent cases.

Of the 83 cases the results of treatment were known in 65.

Patients having—	Cured.		Relieved.		Not relieved.		Totals.	
		per cent.		per cent.		per cent.		per cent.
Hypermetropia, 28 cases...	11 = 39		12 = 43		5 = 18		28 = 100	
Emmetropia, 14 " ...	3 = 21.5		9 = 64		2 = 18		14 = 100	
Astigmatism, 15 " ...	5 = 33.3		9 = 60		1 = 6.6		15 = 100	
Myopia, 8 " ...	3 = 37.5		5 = 62.5		0 = 0		8 = 100	
Total, 65 cases...	22 = 34		35 = 54		8 = 12		65 = 100	

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE MEDICAL ACT AND THE LICENSING BODIES—LONDON AND EDINBURGH UNIVERSITY EXAMINATIONS—THE SOCIETIES—HOSPITAL SATURDAY—DECREASE OF SMALL-POX—THE INVENTOR OF CHLORODYNE.

London, September 13, 1884.

The Medical act having been withdrawn by the Government, all the examining bodies are free to pursue their career unchecked for at least another year—probably for several years. These comprise (within the United Kingdom) eleven universities and nine corporations, but as for many years past one university (St. Andrews) has almost ceased to give degrees except to those already qualified and on the register, and the Edinburgh Colleges of Physicians and Surgeons have lately agreed to only give their diplomas jointly in future, the portals by which the profession may be entered now only number eighteen. These are more than enough for a profession of only twenty-five thousand members. The mischief consists more in the inequality of the tests imposed by these various bodies. Even the universities vary greatly. An M.D. Edin. is very different from an M.D. Lond. At Edinburgh, at all except the final examination for the M.B. degree, if a candidate fail only in one subject he is allowed to go up again in that subject alone in a few months' time. One or two failures in single subjects do not, therefore, necessarily prolong his curriculum. I am informed that even at the final examination, should a candidate do badly at his clinical he is allowed to have a second chance before being finally rejected. If then unsuccessful he has to wait twelve months before going up again.

At the examinations for the London University M.B. degree, failure in only one subject is fatal. The whole examination has to be passed over again, including those subjects in which the candidate was previously successful. With the exception of that for matriculation, the

examinations are only held once a year, so each failure involves a year's delay.

Without discussing the question of whether the London University examinations are harder in themselves than the Edinburgh ones, these differences obviously render the Edinburgh degree easier of acquirement. Some choice also is allowed at the earlier examinations there as to what subjects to be examined in at once. At the London the only option now allowed is in physiology, that lately offered at the preliminary scientific examination being now rescinded. I think, though, on the whole there cannot be much doubt that the "London" is more exacting than its Northern sister. With all the advantages offered in our London schools, the proportion of London students who graduate at it is very small.

The medical societies will soon begin their meetings again. A practitioner who attends several societies regularly finds a distinct gap made in his winter evenings. Four of them, viz., the Medico-Chirurgical, Clinical, Pathological, and Obstetrical, meet in the same rooms on different evenings. It has been proposed to amalgamate these, and perhaps the Medical Society also, under the title of the "Academy of Medicine," with of course different sections. This arrangement would have many conveniences, but although it has several times been proposed nothing has come of it as yet. One practical difficulty consists in the varying rates of subscription of the various societies. Another would be found in arranging the division of the property held by them. The Medico-Chirurgical possesses what is considered to be the best medical library in London, and its Fellows are allowed to take the books home to read. The Obstetrical Society also owns a very good library. The Dublin societies have, however, united to form the "Academy of Medicine in Ireland," with four sections and two sub-sections. so perhaps the London societies may yet see their way to follow suit.

Hospital Saturday has been so unsuccessful this year that it is proposed to have a second one this day fortnight. At its best it has never been as successful as the Hospital Sunday Fund. Last year the "Sunday" brought in more than three times the amount of the "Saturday" fund.

Small-pox is rapidly decreasing. Last week only twelve deaths from it occurred in London.

Dr. Collis Browne, the so-called inventor of chlorodyne, has just died. Chlorodyne is perhaps the only patent medicine and secret remedy which has been largely employed by medical men. The makers contended that it contained a certain alkaloid which gave it valuable properties. They declared that this could not be discovered by analysis. This proved to be so far correct that many people were inclined to regard the "alkaloid" as a myth. Several lawsuits have been waged over chlorodyne. The final result was to leave the original inventor, Dr. Browne, in undisturbed possession of his rights. He derived a large income from the sale of the preparation.

CENTRAL EUROPE IN A CHOLERA SUMMER —THE CLEANLINESS OF PARIS AND LONDON—THIRD INTERNATIONAL CONGRESS OF OTOLOGY, IN BASEL.

To the Editor of The Medical Record.

SIR: I would not advise even a medical man, who desires a vacation in Europe, unless he is specially interested in the germ theory, to choose a summer in which Asiatic cholera is epidemic in a few places, and is about to become epidemic in a great many more. But, to the passengers landing at Southampton on June 26th, the announcement that cholera had broken out in Toulon, and that it would undoubtedly spread over France and throughout Europe, was like thunder from a clear sky. Many a prophet has lost what reputation he may have had by predictions as to how and where the cholera would extend. The July fête was to bring it to Paris. The fête was held, but no cholera came. Refugees from Toulon and Marseilles came to Paris by the hundred; some of them to the very hotel from which this letter is written. No quarantine was established. People were not even disinfected, but Paris has been kept strictly clean, and if the cholera has reached it at all, it has only been in a few sporadic cases, as yet scarcely worthy of specific attention. On the other hand, poor Italy has rigidly maintained a quarantine extending even to the peaks of almost inaccessible frontier mountain tops, and maintained it actually at the point of the bayonet. She neglected, however, to clean Spezzia and Naples, and, as we all know, she is suffering from an epidemic as ruthless as that which depopulated and impoverished the cities and villages of Southern France. The condition of Naples, at the time of the late outbreak, was the same as that which has given it a pre-eminence among filthy cities. There was not enough water for personal or public cleanliness. Cesspools existed in nearly all the houses in the poorer parts of the city. Their solid contents were kept for months, while the fluid oozed away in rather small channels. Their zeal in this direction was occasioned by a desire to enrich their vine and olive yards. A great storm, occurring just before the outbreak, caused many of the outlets of these cesspools to overflow, with effects that it does not require a medical mind to imagine. To return to the prophets for a moment. It is said that an English physician got a guinea early in the season for advising an American lady, who had come to Europe for a prolonged stay, to sail for home in the first steamer, because, as he believed, the cholera would soon be in England, and then the steamers to America would cease running. As a matter of fact, travelling in Central Europe this summer, barring the very hot weather, has been pleasanter than usual.

It is true those who trust to the opinions and fears of the average public must have had many misgivings. We were warned not to go to Vienna, because the cholera was just about to break out there. As you know, there has not been a single case in that city. Then, again, we were told that Switzerland would be packed full of people and very unhealthy, but Switzerland was not full, and was never healthier. Poor Geneva was almost bereft of American and English visitors on account of the repeated statements that the cholera had actually broken out there. I think Americans, as a rule—those who did not turn back to enjoy the earthquake—went to Scandinavia, Ireland, Scotland, and England. Occasionally one, not able to resist the blandishments of Paris, stole over from dirty London to that most cleanly city. We, in Central Europe, have had exceedingly good rooms, attendance, and very civil landlords, but a very hot summer. A few travellers have been disinfected at Geneva, but it seems to have been rather a source of amusement than of actual annoyance. I think it remains to be proven that quarantine or disinfection are of the slightest service. If cholera be a contagious disease, then it is very singular that the most of France, all of Germany, Austria, and Switzerland have thus far escaped the epidemic, while fugitives from Toulon and Marseilles have been running with their bag and baggage all over these countries without let or hindrance. I suppose the ravages of the disease at Naples can hardly be exaggerated, but if our newspapers would cease to put panic-striking head-lines over the paragraphs in regard to the spread of the cholera, and reserve their rhetoric for appeals for personal and public cleanliness, much could be done to arrest the progress of an epidemic, the cause of which we know to be chiefly founded in dirt. It is possible that, despite the Berlin conference and its opinions, we shall all yet believe that cholera Asiatica, cholera nostras, and cholera morbus are one and the same.

The man in Tennessee about whom I read in a New York paper, and the one in Ireland, may actually have had cholera like that of Naples. The results of British cleanliness in India seem to indicate that cholera may often be

expected where great heat, public and personal filth exist in the proper combinations. As has been already intimated, this letter is written from Paris. I have never had a proper idea of how a great city may be kept clean until I saw Paris as it is this summer. Clear water actually flows through the gutters and over the streets two or three times a day. The poor quarters are as clean as those in which the rich live. London bears no comparison to the French capital in point of cleanliness. In fact London seems to me, in this latter part of September, by no means a clean city. Cleaner than New York it certainly is, and I read in the English papers that they are cleaning up everywhere. One of her eminent sanitary authorities states that cholera in England always saves more lives than it takes, since it lessens the mortality from typhoid fever for a year; the cleaning being too late for one purpose, but in time for the other. I hear great things of the cleansing which has been undertaken in New York this summer. It is to be devoutly hoped that it is all true. With the standard of cleanliness that has hitherto existed among our rulers, and with our bad pavements and our scarcity of water, I doubt very much if New York is yet clean. Our passengers will be convinced if, when landing from the ocean steamer, we are not regaled with the usual sights and smells of Canal and Christopher Streets, and Seventh Avenue. Perhaps the medical profession of New York could not do a better work this winter than in preparing for the cholera of next summer by organizing a street repairing and cleansing society. Whatever other lessons this season of cholera has conveyed, this one stands out pre-eminently, that in cleanliness, personal, household, and municipal, are to be found the only preventive means, while quarantines and disinfections are but delusions and snares.

Many of the readers of THE RECORD may have forgotten that the first International Congress of Otology was held in New York in 1876. It was very sparsely attended by Europeans. Indeed, I believe but one paper was read for a foreigner. The Congress was held in the same year with the International Medical Congress in Philadelphia and the International Congress of Ophthalmology in New York. There was a volume of Transactions published, however, and a second Congress was held in Milan in 1880. The third has just taken place in Basel, from the 1st to the 4th of September. Basel has a small university, but one of renown. Vesalius taught anatomy there, and it has furnished several great teachers to other universities. Through the efforts of Professor Burckardt-Merian and Professor Politzer, Drs. Lowenberg, Ménière, and others of the Committee of Arrangements, the Congress was a success in numbers and in the character of the papers read. More than eighty names were inscribed on the roll, among which were Moos, Bezold, Pritchard, Politzer, Delatouche, Ménière, Gelle, Lowenberg, Guye, Colladon, Hartmann, Kuhn, Sapolini, and Valentin.

The Governments of Switzerland and of Basel were very courteous and hospitable. The social entertainments—public breakfasts and dinners—were of a charming kind. The speeches of the representatives of the municipal and State authorities were even eloquent. In fact, it seemed to me that the manner of speaking of our Continental brethren, both in the Congress and at the social entertainments, was singularly happy. Some of the speakers read their papers while sitting, after the manner of German professors in the lecture-room. This seemed to me to contribute materially to the ease of the delegate reading a paper. The discussions were lively in the extreme, as well as polyglot. French was the leading language, since no Frenchman ever appears to understand or speak any language but his own. Burckardt-Merian, Politzer, and Moos gave some very fine anatomical and pathological demonstrations. The papers read in French were epitomized in English and German by Guye and Lowenberg, who were the volunteer interpreters for the Congress. At some points the sounds at the dispersion from the tower of Babel were possibly reproduced. I am sure many of the readers of THE RECORD will be interested in the volume of Transactions.

The next session of the Congress is to be held in 1888 in Brussels. A telegram was read from the mayor of that city welcoming the meeting in advance. A proposition to meet in Washington, as a part of the International Medical Congress, found no favor, otology being considered to be a plant which requires a whole garden, and not a mere plot, to itself.

PARIS, September 12, 1884. D. B. ST. JOHN ROOSA.

"ON THE ARREST OF TUBAL PREGNANCY BY GALVANISM."

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In reading Dr. Mundé's interesting case, in the last issue of THE RECORD, entitled "A Successful Case of Arrest of Tubal Pregnancy by Galvanism," I noted both a point for discussion and a mistake to correct. I am all the more ready to avail myself of any opportunity to extend the consideration of this subject because it is an accident so comparatively infrequent that it is only occasionally that the immense value of electricity in saving life in this condition is brought to the attention of the profession.

Considering the number of successful cases that have been reported, it is indeed surprising that one meets with so many physicians who have either never heard, or who have forgotten the fact, that electricity offers a safe and speedy relief from this dreaded abnormality of pregnancy.

Dr. Mundé raises the question as to the form of current most suitable in these cases, preferring faradism, and basing his preference on the satisfactory use of it in several cases by others, and on the fact that in his own case prolonged and alarming prostration followed the use of galvanism.

If these cases were recurring with great frequency, experience would soon decide which was the surer and safer method, but as they are relatively so infrequent, physical and physiological laws must partially guide us. We know that galvanism is a far more potent agent than faradism in its relation to living tissue, and more destructive to life, and so has an advantage over the faradic current. As to the effects of the application on the mother, I am persuaded that they never need be harmful, or especially painful, no matter which form of current is used.

In his own case, Dr. Mundé made use of twenty-four cells, giving shocks that were "quite painful," through a séance of ten minutes. He says: "I did not think the current too strong, for I remembered that in one of the successful cases reported (McBurney's), thirty-six cells had been used." The correction that I wish to make is that, in the case to which reference is made, but twenty-three cells were used.

In six other cases where I successfully used electricity (all of which were reported in this journal), and which went to make up the eleven cases collected by Garrigues, to which Dr. Mundé refers, the current strength was much less. In two cases only twelve cells were used, and in none of them did the slightest ill effects ensue; all of which goes to show that a much weaker current of galvanism will, in all probability, prove effective than was at first supposed.

My experience leads me to believe that one-half the number of cells used by Dr. Mundé, and with an application one-half as long, would have been sufficient. His statement that thirty-six cells were used in McBurney's case was due, I suppose, to the fact that in the report it was stated that my thirty-six-cell battery was brought.

It is readily seen that it must be of vital importance to use the minimum of current strength necessary to destroy the life of the fœtus, not so much perhaps on account of the possibility, in rare instances, of its prostrating the patient, but because the stronger the current the greater the possibility of rupturing the already distended tube.

September 27, 1884. A. D. ROCKWELL, M.D.

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Original Articles.

CONTRIBUTIONS TO THE ANATOMY OF THE LEMNISCUS.

WITH REMARKS ON CENTRIPETAL CONDUCTING TRACTS IN THE BRAIN.

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I.

I.—INTRODUCTION.

THE attention of those who are interested in determining the location of special functional nerve-tracts in the brain and spinal cord has been more particularly directed to the one which mediates the conveyance of voluntary impulses from the supreme centres in the cerebral cortex to the deputy centres or outposts in the anterior cornua of the spinal cord, and their analogues the nuclei of certain cranial nerves. Aside from this, only the internal capsule, empirically discovered to contain a sensorial tract in the posterior part of its posterior division,[1] and the differentiated tracts in the spinal cord have received much attention. Among the reasons which account for this favoring, the greater frequency of disease of these parts as compared with others, their easy topographical demarcation, and systemic clearness, are the chief.

It is evident, however, to those who look beyond the popular aspect of cerebral localization, that what was until quite recently a *terra incognita* to most cerebral pathologists—the brain axis—contains within its labyrinthine maze the solution of much that is enigmatical in the cerebral mechanism. Here are found, besides the important cranial nerve nuclei, and the tracts which bind these into co-ordinated reflex or automatic associate action, the great projecting fibre masses, which Meynert first attempted to systematize. Here are the channels for the transmission of special qualities of sensation, and of those obscure influences which determine co-ordination. The tracts which are more or less fused into the bifid cylinder of the cord attain greater distinctness, and separate more widely, as they pass through the oblongata and pons, in order to reach their mutually remote destinations. Many of them are inaccessible to the experimenter, and so rarely the site of limited (focal) disease, that it is improbable that their function will ever become known by the empirical but crucial tests of the physiologist and pathologist. Anatomical methods must supply the deficiency, at least for the present, and a small army of anatomists, following the lead of Gall, Meynert, Foville, and Gratiolet, and working with the improved methods of Stilling, Gudden, and Flechsig, are rapidly completing the survey of the course taken by the great nerve-tracts, discovering their ganglionic and peripheral terminations, and enabling the physiologist to infer the rôle they play in the machinery of thought and action.

In the course of these researches it has become noted as one of the most significant facts, that there is a remarkable difference in kind between the course of the tracts of voluntary motion and those which convey sensorial impressions—a discrepancy which may yet lead to a complete revolution in the views generally entertained of the central nervous functions. I refer to no less startling an innovation on the current views than the possible one, that certain of the tracts which are ordinarily regarded as sensory, and hence—almost self-evidently—as centripetal, are really the seat at the same time of centrifugal functions.

While the tract of voluntary motility directed to the extremities runs clear of all ganglionic interruption from the supreme centre, the cortex, to the gray matter of the cord, not one of the sensory tracts has been traced to a *cerebral* termination, without encountering a ganglionic interruption. The columns of Burdach and Goll, for example, terminate in the nuclei of those columns, the direct myelo-cerebellar tract runs into the cerebellum, and other less individualized fibre-systems, which may possibly have a relation to sensory functions, are connected with and provisionally at least terminate in some one or other ganglionic way-station or *terminus*.

If on comparing the relative development in various animals of the internodial ganglia connected with these tracts, it were found that they are less developed in higher than in lower animals, it might be inferred, as I urged with regard to certain other ganglia and tracts, that they represented necessary steps in phyllogenetic development, destined like the human tail, and the notochordal relic in the *ligamentum suspensorium dentis epistrophei*, to become obsolete. For nerve-tracts subservient to higher functions do exhibit a tendency to emancipate themselves from ganglionic interruptions, probably because a direct telegraphic connection—*cæteris paribus*—is a more perfect mechanism than one which has to pass many interrupting stations.

But this is not the case with regard to the ganglia under consideration. Their interrupting stations, such as the nuclei of the columns of Goll and Burdach, and the dentated nucleus of the olive, attain their highest development in man and the anthropoid apes. There is as much of higher individuality in the varying contours of the last-named body, as there is in the cerebral hemispheres themselves; just as the monkeys alone resemble man in the type of cerebral convolution, so they alone of all animals present anything like the same character, relations, and degree of olivary corrugation.[1] If there is any inference to be drawn as to the physiological importance from rela-

[1] It is surprising to find how uncertain, not general medical writers, but specialists, who have furnished accounts of the cerebral architecture, appear to be on this important head. The tracts for the control of the motor cranial nerves (with the probable exception of the oculo-motor series), and the pyramid tract, which conveys voluntary impulses to the extremities of the opposite side, as ascertained by Flechsig, are situated in and behind the *genu* of the internal capsule, that is in the anterior part of the posterior or *thalamo-lenticular* division, not in the "anterior half or two-thirds of the capsule" as Seguin (Lectures on Localization, MEDICAL RECORD, vols. xiii and xiv.) and a few others represent it. Where those who are familiar with cerebral topography, who have actually manipulated brains, besides being active as original and laborious contributors to the subject of cerebral pathology, err, it is not to be wondered at that compilers should follow. Ranney (Applied Anatomy of the Nervous System, pages 44, 48, and 91) repeatedly makes the same erroneous statement. Perhaps the loose ideas on this subject are in part due to the faulty conceptions of the situation and course of the internal capsule which such diagrams as that of Dalton, copied on page 92 of Ranney's book, are calculated to foster. Here the pyramid fibres of the capsule are actually made to decussate in the pons! It is best, in order to avoid confusion, to speak of the anterior of the two great divisions of the capsule which lies between the ecto-caudad slope of the *caudatus* and the meso-cephalic slope of the *lenticularis*, as the "caudo-lenticular capsule" and of the posterior, which lies between the meso-caudad slope of the *lenticularis* and the ecto-cephalic slope of the *thalamus*, as the "thalamo-lenticular capsule." It is in the latter alone that the "anterior" motor division and the "posterior" sensory division are located (Flechsig, Wernicke, Strümpell, etc.). The so-called external capsule, which lies between the ectal face of the *lenticularis* and the *claustrum*, might be distinguished by the term "claustro-lenticular" capsule.

[1] And this not as an expression of generally high cerebral development in the anthropomorphæ, but of affinity in zoölogical position, and, what is practically equivalent, of peripheral disposition, for the elephant and porpoise, with far more complexly convoluted hemispheres than man even, have simpler olivary bodies, resembling those of their humbler congeners, the hog and the sea-lion. Meynert is utterly at sea where he refers to the remarkable development of the olive in marine mammals, for the same elevation passes as the pyramids in Huguenin's treatise.

tive development, these interrupting stations must be regarded as important factors in the central laboratory. This is almost the same tale as that which might be told of the cerebellum; a ganglion, which may be regarded as a gigantic way-station, in which auditory and spinal tracts meet, and are continued brainward, through cerebello-cerebral fasciculi. It was not so very long ago supposed that the cerebellum as a "lower centre" was crowded out by the higher cerebrum in the ascending animal series, whereas the fact is that this ganglion is vastly larger and more intricate in higher animals than in lower ones, and shows an individuality in the type of its foliated arrangement, comparable to that adverted to in the case of the olivary nuclei.

It being thus evident on structural grounds that the ganglionic enlargements in which certain spinal tracts appear to terminate have an object, which could not be fulfilled if those tracts ran directly to the cortex, we must look to the other connections of such ganglionic masses for an explanation of that object. To take a hypothetical case. Suppose the cerebellum received fibres from the skin through the "sensory tracts" in the cord, and from the semicircular canals through the auditory nerve, and despatched another tract to the cerebrum; assuming that the direction of functional transmission were in all these tracts toward the cerebrum, there could be but one conclusion: that the cerebellum served to co-ordinate and fuse space sense perceptions from the skin, and such from the semicircular canals, and acted as an informing depot for the cerebrum; the latter is through its informant, which spares the cerebrum the task of co-ordinating these impressions into a united general space sense, enabled to guide motion in accordance with the latter.[1]

The probable object of the internodial or interrupting ganglia is the mediation of some functional combination. The manifold interruption of the tracts of sensation, as contrasted with the direct course of the tract of voluntary motion, hence appears as the anatomical expression of the fact that the motor impulse is a comparatively simple step, but that the building up of the contact and space senses which guide such motion to a skilful purpose is a far more intricate and laborious task, which is thrown on the centripetal tracts, and hence requires a greater anatomical complication.

I need but cite briefly a few facts recently observed by me in an interesting case[2] which justify the surmise above expressed, that certain tracts physiologically and anatomically regarded as centripetal really may convey functions centrifugally in a part of their course. An elderly gentleman, after a small hemorrhage in the pons, which caused unilateral ataxia of the opposite extremities, lived six years, during which time an intense secondary degeneration developed in the *descending* direction, and terminated after decussating in the opposite nuclei of the columns of Goll and Burdach, which were likewise atrophic. Now as far as secondary degenerations follow any law,[3] it is supposed that if a ganglion degenerates together with an appended tract, that both must belong to the same physiological system. The columns of Goll and the upper part of the columns of Burdach degenerate centripetally, that is, upward, or *toward* their nuclei. The diseased tract in my patient had degenerated centrifugally, that is, cordward, and hence from an opposite direction, also *toward* these nuclei. Here is an unquestionable instance in which two segments of the same tract—for the upper segment must be regarded as in part the cephalic continuation of the lower—degenerate toward an interpolated ganglion when diseased, justifying the assumption that functional impressions converge toward it, though not excluding the possibility of a continuous transmission brainward of sensory impressions[1] at the same time.

I have considered it necessary to make these introductory remarks, because to me the impression seems to prevail that all that is necessary to understand the anatomical part of the cerebral mechanism is the tracing of the centripetal tracts to the muscles in which they terminate, and the centrifugal ones to the cortical fields, from the peripheries, whose impressions they convey to them. This is important and essential, but it does not exhaust the duties of the anatomical psychologist, and is not even feasible in the case of many fasciculi. What I said some years ago[2] with regard to the functions of nerve-centres generally, "That day is past when it could be considered legitimate to refer every phenomenon provoked by an intracranial experiment to an altered activity of any single centre!" naturally applies also to the nerve-tracts whose connection with the nerve-centres is a factor in the function of the latter.

With these preliminary remarks, I have intended to pave the way for the understanding of the lemniscus: a nerve-tract of at least equal importance with that of the pyramids, an importance which is just being recognized, and which from its manifold, systemic, and topographical relations offers an opportunity for the discussion of many new or imperfectly understood features of isthmus anatomy.

II.—External and Gross Anatomy of the Lemniscus.

On the outer (lateral) face of the mesencephalon, that is, on the slope which intervenes between the *corpora quadrigemina* and the bulging *pes* of the cerebral peduncle of each side, there is a distinctly marked triangular field, known as the *lemniscus* or *lagueus*.

This is not merely a surface feature of the brain-isthmus (or axis), but the exposure of a great brain-tract, which in this particular area is uncovered by other nerve tissues, and elsewhere is deeply imbedded in the substance of the *thalamus* region, the *pons*, and passing through the *oblongata*, becomes intimately related with the ganglionic elements of the great centripetal columns of the cord, namely, the nuclei of the columns of Goll and Burdach, as well as the dentated body of the olive. Just as the columnar elevations of the oblongata, known as the pyramids, represent only a small segment of that great system, the will-tract, to which they have given the anatomical name of "pyramid-tract," so the surface area of the lemniscus indicates but an insignificant portion of the great tract which bears the same designation.

Halier[3] discovered the lemniscus, describing its situation and shape, but to Reil[4] is owing the credit of having recognized that the triangular field discovered by Haller is only the surface denudation of an important system of fibres. He found that it was not in connection with the pyramids, though some admixture of the fibres of the fillet and the pyramid was alleged by him, and traced it to the situation to-day known as the stratum of the fillet (Schleifenschicht). He later claimed that it passed between the olivary nuclei and the pyramids in the oblongata, and became indistinguishably fused with both of these bodies. Rosenthal undertook to correct this latter statement, which, as far as the pyramids are concerned, is partly true, for my own case demonstrated the existence

[1] The facts happen to justify this hypothesis, to some extent. As bearing on what the writer said about the possibility of tracts customarily regarded as centripetal conveying centrifugal functions, it may be well to refer to the fact that if Flechsig's suspicion, that the direct myelo-cerebellar tract is centrifugal, turn out to be well founded, that the cerebellum may exert a direct influence on a certain class of movements, without the intervention of the cerebrum at all. This would but increase the force of the remarks made in the text, as to the importance of the "interrupting" and "co-ordinating" stations. The above idea has been borrowed, with others, by Ranney.

[2] This case has been reported elsewhere, to be hereinafter referred to, when the questions involved will be more fully discussed.

[3] I question whether they do follow such law as invariably as some assume.

[1] Or of hitherto unsuspected centrifugal transmission cordward. The columns of Goll may occasionally degenerate downward or simultaneously with their nuclei: at least this seems to have been so in Sioli's case (Archiv f. Psychiatrie, xi., 3, p. 693). This surmise would offer the explanation of possible physiological transition for the case of some rodents, like the rat, in whom, according to Flechsig, the fibres of the true (?) pyramidal decussation enter the posterior columns.

[2] The Architecture of the Oblongata, N. Y. Medical Journal, September, 1881. It is refreshing to find this identical conception emanating from another writer in the same journal several years after. Unfortunately the context of his conclusion furnishes no hint as to the method by which he arrived at an opinion so similar in its phraseology to the writer's. It is in fact a disconnected plagiarized sentence, like another previously referred to as appropriated from the same source.

[3] Elementa IV., p. 175. According to Burdach.

[4] Reil's Archiv, ix., p. 149.

of degenerated fasciculi in the otherwise healthy pyramid, and these were connected with the degenerated interolivary field.

The discovery of Haller was ignored by the anatomists who described the mesencephalon after his time, and before that of Reil. Vicq d'Azyr,[1] whose plates are usually singularly true to nature, represents the lateral field of the mesencephalon as a uniform rounded surface, and neither designates nor describes the lemniscus, while Gall[2] gives an excellent illustration, particularly accurate as regards the deeply depressed acute apex, but does not refer to it (Plate XIII., under "30").

Burdach, who mainly follows Reil's description, gives an accurate account in his text, but his artist erroneously represents the fourth pair as arising from each lemniscus, instead of from the valvula (Plate IV.). The lateral aspect is very well represented in the fifth plate of the same work.

Reil recognized comparatively clearly that the lemniscus, in passing through the pons, is distinctly separated from the transverse fibres of the cerebellar system, and in many of the writings and illustrations of his day, it may be seen that the so-called "bundle from the pes to the tegmentum," described by Henle,[3] was considered, at least in its posterior division, a part of the lemniscus.

One of the sharpest lines of separation of nerve-tracts is the one which in the pons region separates the lemniscus and the transverse pons fibres. This line of separation was misinterpreted by the older anatomists. Vicq d'Azyr's artist, one of the most conscientious draughtsmen, has permitted his artistic interpretation to encroach on anatomical truth, more in this than in any other detail of encephalic anatomy. On Plate XXV. he makes a round nugget of the pons, completely encasing it in a whitish shell, of which the dorsal half is the bundle from the pes to the tegmentum, while the ventral portion represents the superficial transverse fibres of the pons. The joining portions are altogether imaginary. He apparently recognized the continuous tract of the above-mentioned bundle, but engraved it from memory, notes, or hasty sketches—he certainly had not the specimen before him—and confounded the posterior longitudinal fasciculus, the stratum intermedium, and the tracts from the mamillary body, duplicating them in one place so as to be entirely incomprehensible.

The bundle overlying the line of separation is very distinctly and correctly represented on Plate XII. of Gall's atlas.

The figure reference (85) reads: "Ligne de séparation entre les parties antérieures (ventral) et postérieures (dorsal) de la masse cérébrale ascendante," and evidently relates to the sharp line of demarcation which separates this fibre mass from the transverse pons fibres. The course of the tract as visible in sagittal sections is correctly represented as being between the *substantia nigra* (*Ganglion Soemmeringii*, E. C. S.), and the olivary region.' I have sections in my collection which are exact reproductions of this plate, a signal confirmation of the accuracy of Gall's delineations.

In order that the general reader may not become lost in the obscurity of the brain-axis terminology, I may be pardoned for digressing here to explain the meaning of some of the terms already used, and the topography of the parts with which we are about to deal.

The brain axis or isthmus is the continuation upward of the spinal cord. It is the common trunk (hence the German term "Hirnstamm" or brain trunk) from which the two cerebral hemispheres crop out like swollen ter-

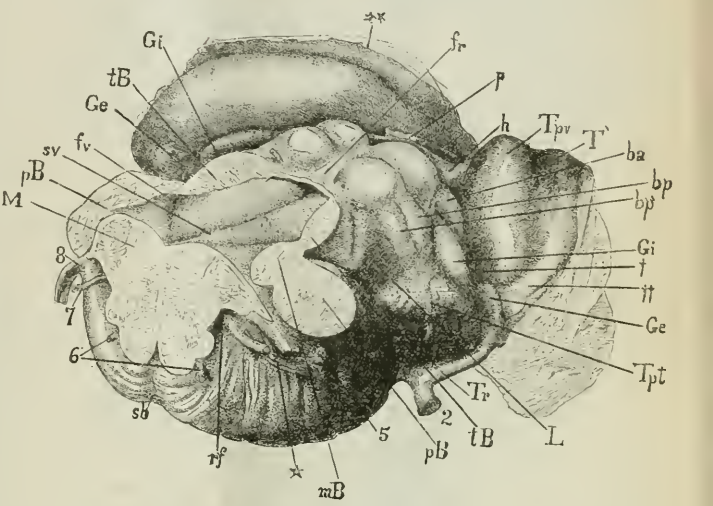

FIG. 1.—Brain Axis or Isthmus, with the Oblongata nearly entirely removed, by a sweep of the knife through the Acustic Striæ. *M* represents this cut surface, on which the contours of the raphé, olivary nuclei, pyramids, and restiform columns are faintly indicated. The isthmus is tilted in such a way that the lateral and superior (dorsal) faces are simultaneously visible; in other words, if the plane passing through both (ideal) retinal planes of the observer be regarded as vertical and corresponding to the page, the axis of the isthmus deviates from this plane forward 45°, and upward in the plane 27°. The following indicate the principal parts. A, of the oblongata: *M*, cut surface; 8, auditory nerve root. B, of the pons: *pB*, cut surface of *pontis brachium* (middle cerebellar peduncle); *mB*, ditto of *myelo-brachium* (posterior cerebellar peduncle); *tB*, *tB*, ditto of *tegmenta-brachium* (anterior cerebellar peduncle); those of both sides are connected by the divided *valvula*, of which *fr* indicates the *frenulum*. Between the cut edge of the oblongata section and the semicircular combined section of the cerebellar peduncles, the anterior half of the fourth ventricle is set like a picture in a frame; *sv* indicates the *median sulcus*, which anteriorly deepens into the aqueduct under *fr*, while *fv* indicates the fovea, from which a groove runs demarcating part of the auditory triangle. The other references are: 6, abducens (sixth) nerve roots; 7, ditto facial; 5, ditto trigeminus; *, the *tractus interradicularis pontis*, named and described by the author in the *Am. Jour. of Neur.*, May, 1884; *rf* the *recessus facialis*, named and described in the same number. C, of the mesencephalon: *fr*, *frenulum valvulæ*; *ba*, anti-brachium; *bp*, *bp'*, post brachium; *Gi*, *ganglion geniculatum internum*; *Tpt*, *tractus transversus pedunicularis* (crossing the pes). The corpora quadrigemina are so characteristic that they require no designation. D, of the thalamus segment: *Tpv*, pulvinar; *h*, *habenula*; *p*, cut surfaces of *epiphysis* (pineal gland); *Ge*, *ganglion geniculatum externum*, which is really only a thalamic nucleus; *Tr*, optic tract; 2, optic nerve; **, reflection of endyma of lateral ventricle; †, insinuation of branch of optic tract between *Gi* and thalamus to pass to *ba*; ††, singular tract-like elevation of thalamus surface, hitherto undescribed, and not equally well developed in all brains.

minal branches, while the cerebellum is an excrescence of the trunk itself.

In its general shape, excluding the inflections, it may be compared to an inverted truncated cone, for as we follow it up toward the cerebral hemispheres, it becomes wider and deeper, enlarging progressively in all directions. The lower small end is the spinal termination, the upper wide end is the cerebral or thalamo-crural end. The entire axis may be considered under the following four heads: 1. Thalamic division. 2. Mesencephalon (region of the corpora quadrigemina). 3. Pons. 4. Oblongata. In the main the thalamic division consists dorsally of two great flaring-out masses, separated by the third ventricle. Ventrally it includes the subthalamic region and that part of the crus which prepares to merge into the internal capsule.

The mesencephalon is marked dorsad by the four beautiful eminences of the corpora quadrigemina, ventrad by the symmetrical and cylindrical prominences of the

[1] Traité d'Anatomie et de Physiologie, 1786, tôme 1ere, Plates XXVII. and XIV.

[2] Anatomie et Physiologie du Systéme Nerveux et du Cerveau en particulier. Paris, 1818.

[3] Anatomie des Menschen, iii., 1871.

[1] Respectively references 30 and *a* of the same plate.

crura (pes portion). The transverse section in adult man exhibits a black crescentic line on each side which sharply separates the crus proper (pes) from the dorsal part, which merges into the corpora quadrigemina and is known as the tegmentum. This black crescentic line is the *substantia nigra* of Soemmering. It constitutes the most important boundary line in the deep anatomy of the brain axis.

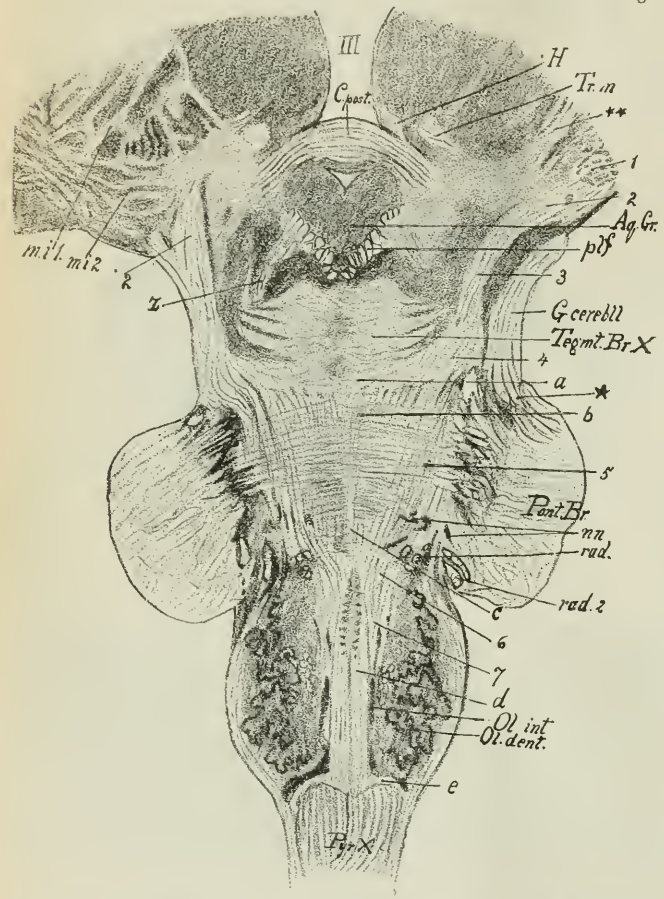

FIG. 2.—Section flat-wise, that is, parallel to the base of the brain axis, through the *Thalami*, *Mesencephalon*, *Pons*, and *Oblongata*, extending to the *Spinal Cord*. It dips a little lower on the right than on the left side, and to this the slight asymmetry of the figure is due. The following figure references relate to the thalamic and subthalamic regions: *H*, habenular tract; *Tr. m.*, **, *m. t.* 1, and *m. t.* 2, medullary laminæ of thalamus; *C. post.*, commissura posterior; *III.*, third ventricle. The following relate to the mesencephalon: *Aq. Gr.*, aqueduct gray matter; *pfs*, posterior longitudinal fasciculus of the tegmentum; *z.*, part of the descending trigeminous root; *G. cerebll.*, the direct tract from the cerebellum to the posterior part of the cerebrum, discovered by Gratiolet, confirmed by Flechsig, and which courses through the outer part of the *pes pedunculi*; *Tegmt. Br. X.*, decussation of tegmenta brachium or brachium conjunctivum, also known as Wernekiock's commissure. The following refer to the pons: *rad.* and *rad. 2*, auditory and facial nerve roots cut across; *nn*, nuclei of pons gray; *, cerebellar origin of *G. cerebll.*; *Pont. Br.*, *pontis brachium*, or middle peduncle of cerebellum divided across. The following relate to the oblongata: *Pyr. X.*, decussation of true pyramids; *Ol. dent.*, dentated or main part of olivary nucleus; *Ol. int.*, internal auxiliary part of same. The other references relate to the lemniscus tracts, and are explained in the text. The specimen was stained by carmine, being cut in my microtome from the brain axis of a Swede, whose brain I secured through the courtesy of Professor James L. Little. It was hardened in bichromate of potash.

The pons exhibits dorsad the upper half of the floor of the fourth ventricle. Ventrad a bridge of nerve-substance apparently jointing the cerebellar hemispheres.

If the beginner will conceive a conical piece of wood, whose base is turned upward, split by an axe, while a band is thrown around the middle of its length to prevent the split from extending through to the apex of the cone, he will have a crude idea of the relations of the pons as seen at the base of the brain. The two parts on each side of the split are the pedal crura; the split is the interpeduncular or intercrural depression; the belt is constituted by the bridging portion of the pons, below which the unsplit part represents the oblongata.

The pes and tegmentum are separated in the pons by the sharp line of separation alluded to in the historical introduction.

In the oblongata, it is impossible to make as clear a division of the tegmental and pedal part of the brain axis as in the pons and mesencephalon. The pyramids are the true representatives of the pes.

The exterior of the brain axis is sculptured into numerous eminences—some of them in very high relief—and depressions. Of the eminences, some, like the *tuber* cinereum of Rolando, the olives, and the clavæ, are due to the accumulation of gray matter beneath the surface at that point; others, like the pyramids, the restiform columns, the crura, are due to the prominence at certain points of the surface of the great nerve-tracts. It is to this class that the eminence, known as the lemniscus, belongs.

As represented in the figure L the elevation of the lemniscus is a flat triangular field, with one truncated and two sharp angles. Of the latter, one, the superior (dorsal), comes in contact with the superficial origin of the fourth pair of cranial nerves. The anterior corresponds to the (apparent) junction of the *crusta* and *post-brachium*.[1]

The posterior truncated angle is overlapped by the redundant growth of the pons. While the anterior side of the triangle—that is, the one connecting the superior and anterior angles—sinks below the post-brachium, the inferior side is in contact with the dorso-lateral edge of the crus, and the posterior (on which the light in the figure falls) rises in bold relief, cropping out over the *tegmenta brachium*.

These surface appearances indicate the actual relations of the lemniscus tract to some extent. It may be regarded as a flat band, which is dragged out of the substance of the pons to overlap the *tegmenta brachium*, to be overlapped itself by the crus and the *post-brachium*; in its known course it extends from the thalamus region to the lowest levels of the oblongata. Unlike the pyramid tract, which is a single united system of uniform physiological relations, the lemniscus tract includes a number of nerve-bundles having different destinations and different ganglionic connections. Indeed, with our increasing knowledge of this part of the cerebral projection system, it will, I think, become recognized that the including of all these bundles under one generic term is improper and misleading. One feature is found with all of them, that they are (in part, at least) related to functions regarded as centripetal and sensorial, as far as we may draw surmises from structure. The part

[1] Arm of the posterior pair of the corpora quadrigemina. In the figure an interesting variation is shown: this arm exhibits its two characteristic divisions (*bp* and *bp'*), and at the end of the pointer, *bp'*, the intumescence known as the *ganglion geniculatum mediale*.

of the brain axis, in which the lemniscus tracts are seen in their clearest relation, and where the various designations of authorities are most in accord, is exposed by a transverse section through the posterior pair of the corpora quadrigemina or a little behind this, through the *valvula*.[1] Typically each lemniscus stratum consists of an L-shaped area, so situated that the area of each lemniscus stratum touches the median (line) raphé with the free end of the horizontal branch, thus ⌊ ⌋. Even in sections which are inclined to the axis more or less, as in Figure 2, a similar appearance is noted. Here *a* on the right side represents the horizontal branch, and 2 on both sides, 3 and 4 on the right side, represent the vertical portion.

This figure indicates at the same time as much of the entire course of the lemniscus tracts as any one section can. It is seen to extend from above the pyramidal decussation at *e* between the olives at *d*, then spreading over an immense area, along 6, 5, 4, 3, 2, 1, to the thalami, gradually becoming more and more remote from the median raphé, while another detachment remains near to it, at *c*, *b*, and *a*. As in all sections of this character, the apparent continuity of the fibres is accidental, the various parts are intermingled somewhat; but as other sections and other methods of study show, all of them appertain to the lemniscus tract. Let us proceed to discuss these in detail.

(To be continued.)

SOME POINTS ON THE USE OF HEAT AND COLD IN THERAPEUTICS.[2]

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I AM well aware that the subject of the application of heat and cold in therapeutics is a very large and comprehensive one, and I shall attempt no more than to present a few points which have been suggested by my own experience.

The use of heat and cold, in some form, for the relief of disease is almost universal. There is hardly a disease known in which, at some stage, it is not deemed necessary to interfere with or modify the existing thermal conditions, the interference varying between the use of the actual cautery on the one hand and of ice or freezing mixtures on the other. Between these extremes the ways and means of modifying temperature are very numerous. The necessity for some interference is taken for granted. Some of the most advanced professional minds have for centuries past grappled with the problem of temperature as modified in disease—while every household has its favorite theories and maxims concerning the treatment of diseases and injuries by means involving a change of temperature.

Yet, notwithstanding the antiquity of what may be called the thermal method of treating disease, and its almost universal application in some form, there exists a surprising difference of opinion concerning the use of heat and cold, especially as to which of these powerful agents should be employed in any given case.

Professional opinion is assuming greater uniformity on this point with the advance of physiological science; but popular opinion, which often reflects the professional opinion of a former generation, differs very widely. But whether heat or cold is preferred, public opinion is always in favor of the generous use of one or the other. A gentleman of my acquaintance who was spending some weeks in a country region, chanced to sprain his ankle. He was carried helpless to the nearest farmhouse, where he was prescribed for by two experienced matrons. One insisted on placing the limb under a stream of cold water from the pump, and keeping it there for half an hour, assuring him that he would be able to walk the next day if her advice were followed. The other advised placing the injured limb in a pail of water nearly boiling hot, and keeping it *there* for half an hour, promising the same result on the morrow. Meanwhile a boy was despatched to the nearest village for medical aid. The doctor sent for was not at home, but his assistant visited the patient promptly, and endorsed the prescription of cold water, which was thoroughly carried out. On his return in the evening, the senior physician, thinking the patient a gentleman of some consequence, hastened to see him, examined the ankle carefully, and advised that very *hot* water should be applied during the whole night.

A similar difference of opinion is common both in the profession and out of it. Whether it be a sprained ankle, an inflamed knee-joint, a bruise, a wound, a burn, a fever, there is often a radical difference of opinion as to whether heat or cold will give the greatest relief or accomplish the most good. The explanation of this difference of opinion is probably to be found in the fact that many diseases and injuries require at different stages the use of both heat and cold, and that the indications for the use of either one are not always clear. In the earliest stages of inflammation the prompt abstraction of heat often suffices to abort or control the inflammatory process. After inflammatory changes have taken place, the application of heat to the same part may, by stimulating capillary and lymphatic action, hasten absorption and be eminently proper. In some cases this explanation does not apply, as in the use of both hot and cold water for the arrest of hemorrhage, or of hot and cold applications for the relief of neuralgia, regarding which there still exists some difference of opinion. It is safe to say that in no given case is it a matter of indifference whether heat is added or subtracted. The same difference of opinion exists, however, as to the use of some medicinal agents quite opposite in their effects.

But I must necessarily pass over or allude very briefly to many points which suggest themselves in connection with this subject.

I. I will first consider briefly some of the diseases in which the abstraction of heat, generally or locally, is demanded.

Typhoid fever, perhaps better than any other disease, illustrates the good effect of antipyretic treatment. Dr. G. L. Peabody, in a valuable statistical paper read before the County Medical Association, March 17, 1884, on the treatment of typhoid fever, says: "The effect of high temperature is very deleterious upon normal tissues, and its influence is distinctly evil in reference to the possible healing of intestinal ulcers." As the result of his own experience, and a careful examination of the records of the treatment of typhoid fever in seventeen large hospitals, in this city and in Europe, those of the British army and navy, and of our own army, Dr. Peabody emphatically endorses the use of cold water in the treatment of that disease. He shows the mortality to be only seven and one-fourth per cent. in a series of over eight thousand cases; and a series of two hundred and eleven cases in Dr. Brand's private practice all recovered under the antipyretic treatment. Dr. Peabody laments the difficulty of introducing the practice generally, the necessary appliances being cumbersome and expensive. The affusion of cold water he has not found satisfactory; the cold coil he considers unsuitable; and the cold bath the only really efficient method. Now, a cold bath in the immediate proximity of a patient sick with typhoid fever is not often obtainable. The patient may be sick in a country house, where bath-tubs are unknown; in a hotel, where they are fixed and remote from the patient's room. Even in a private house with all modern appliances it is not an easy matter to transfer a patient from a sick-bed to a bath-tub and back several times a day without a good deal of disturbance to the patient, and an abundance of physical help. I would therefore suggest as equally efficient and far more practicable the use of the well-known, but somewhat neglected Kibbee fever-cot, or something

[1] Valve of Vieussen's.

[2] Read before the Practitioners' Society of New York, October 3, 1884.

equivalent to it. This cot, which was first devised and used by Dr. Kibbee for the treatment of scarlet fever, during a severe epidemic of that disease, consists essentially of a common cot or frame on which is stretched strong canvas or other material sufficiently coarse or open to permit water to pass through it. Under this is placed a rubber sheet, to catch and convey the water to a pail placed at the foot of the bed. The patient lies comfortably on this bed, on a blanket and sheet, but of course without mattress. Such a bed can be improvised almost anywhere at a very small expense. I once made a very efficient one, in the country, with an old coffee bag; and I once used an ordinary wire mattress. Any cot covered with canvas may be made available as a water-cot by cutting a sufficient number of holes in the canvas. When it is necessary to apply the cold water, the covering of the patient is removed from the body (not from the extremities), which is enveloped in or covered by a sheet; upon this sheet warm or tepid water is poured gently from a pitcher or watering-pot; the temperature of the water is then gradually reduced until it is sufficiently cold. The stream is kept up for ten or fifteen minutes, a dry blanket is then thrown over the patient, and sleep generally follows.

Having had considerable experience in the use of this method of reducing the temperature in cases of peritonitis and septicæmia following operations, and some experience with it in typhoid fever, I know it to be very easily managed, to come within the skill of any intelligent nurse or attendant; and that by its means the temperature can be reduced to any desired point and maintained there. The apparatus is simple, it requires but a small quantity of water, it involves no movement of the patient, and occasions no shock whatever. I therefore believe it to be the best means available in all cases of fever where artificial reduction of the temperature is desirable. This method was adopted very successfully by Dr. Thomas, for peritonitis following ovariotomy, in 1876.

Next in point of efficiency, for the same purpose, I would class the wet pack, by which I mean a folded sheet, wrung out of tepid or cool water, and wrapped quickly around the patient's body. In this case cooling takes place partly as a result of evaporation. If the attendants are industrious much may be accomplished by the use of towels wrung out of cold water placed upon the body and limbs, and frequently changed. Least useful of all, though very grateful to the patient, is sponging with cold water. If done often enough some heat is abstracted, and if alcohol is used with the water evaporation aids in cooling.

Where it is necessary to effect a local reduction of temperature, there are better means than the fever-cot. In threatening peritonitis after laparotomy, for instance, the use of a coil of lead or rubber tubing, through which water of any temperature may be continuously passed, affords a perfectly simple and efficient means of accomplishing the purpose desired.

M. Galante, of Paris, in 1852, devised a rubber apparatus for continuous irrigation of the eye. Dr. Petitgand, of Paris, had manufactured for him an apparatus of rubber tubing for this purpose in 1859; and in 1866 he published a description of a head-cap made of rubber tubing for the use of cold water, and a *sachet*, a flat coil of rubber tubing precisely similar to the abdominal coil now in use. In 1879 Dr. Dumontpallier published a description of a series of tubular covers and mattresses, by the use of which, according to experiment, he claimed to be able to accomplish much more rapid and uniform refrigeration in typhoid, varioloid, and other fevers, than could be accomplished by the cold baths of Brand.

The use of the head coil of lead or rubber is now very general; and the abdominal coil is likewise becoming popular. Nothing can be simpler or less disturbing to the patient than the use of the abdominal coil, and in incipient peritonitis nothing that I am aware of is so efficient. The application of the rubber coil to this particular class of cases was suggested by Dr. A. B. Townsend, in the Woman's Hospital, in 1881. The coil is applied directly to the skin, or a thin towel is interposed. A bandage is then placed around the body to keep the coil in place; a pail of water, containing a lump of ice, stands on a table near the head of the bed, and a pail under the bed receives the water as it passes through. At the latter extremity, where the water escapes, there is a stop-cock by which the flow may be nicely regulated or entirely stopped, as may be rendered necessary by the temperature of the patient, as shown by a thermometer placed in the axilla from time to time. Unless the apparatus should be irksome to the patient, which is seldom the case, it is not necessary to remove it as long as there is any likelihood that it may be required. By simply opening the stop-cock the flow of water begins, and the cooling process may be stopped or resumed without waking a sleeping patient.

I have used in the manner just described both the rubber coil and the coil of fine leaden tube known as Leiter's coil. The latter have not been generally in the market, or I think they would have taken the place of the rubber in many cases. They are not so heavy, when full of water, as the rubber coil; they are not liable to become dirty, and have not the unpleasant odor of rubber. They are more durable and less expensive. They are not more liable to become clogged with dirt, if the precaution is taken to envelope the receiving end of the tube in a piece of gauze or coarse muslin, which should be done in all cases. With this precaution, and one nurse of ordinary intelligence, I have sometimes kept the leaden apparatus in use for three days and nights without a moment's interruption. One advantage of the metal coil is that it requires less water, and that it is seldom necessary to use ice. Being a much better conductor than the rubber, the use of water at a temperature of 45° or 50° is quite sufficient. I consider these appliances of the greatest possible value where inflammation is threatened, and most important means of limiting inflammation when it has developed. In case of bad operations, where there is every reason to expect peritonitis, I have the coil placed upon the patient immediately after she is put to bed, so that it may be ready for use at any moment. In ordinary cases I wait until the temperature rises above 100° in the axilla.

In the method spoken of the object of course is to reduce bodily temperature; but cold is sometimes used as a means of impressing the nervous system. Chapman's ice-bags act on this principle, and have been found useful in many nervous disorders. My own experience with these ice-bags has been limited chiefly to their application in cases of painful and scanty menstruation. In a certain class of cases the application, for half an hour at a time, of a bag of crushed ice to the region of the lumbar vertebræ and sacrum, has the effect of promoting the menstrual flow. Applied to the dorsal vertebræ, in an anæmic patient with cold extremities, the tendency of the ice-bag is to equalize the circulation and promote warmth throughout the whole body.

Friction with ice is employed in frost-bite. The late Dr. Peace, of Philadelphia, claimed to have had excellent results, in a cholera epidemic through which he passed in Europe, from vigorous friction of the limbs and body with lumps of ice. Where it is necessary to stimulate the nervous system, the alternate application to the spine of a flat brick of ice, and a very hot iron, protected by flannel, is sometimes very effectual.

I shall merely allude to the popular and time-honored belief in the styptic effects of cold; to the undoubted value of cold for the relief of pain in burns; and to the efficacy of ice-cold applications in the causalgia consequent on injuries of the nerves from gunshot wounds.

II. Of the manifold forms in which heat is employed as a remedy for pain and disease, I shall dwell on a few only of the most striking, at the risk, as in what I have

said of cold, of telling a thrice-told tale. For the arrest of hemorrhage a high degree of heat has been long in vogue. The hot iron has held its place as a styptic probably for many centuries; and the cautery in some form is still constantly employed for the same purpose. The use of a moderate degree of heat for the arrest of a more general hemorrhage is of recent origin. To Dr. Emmet we are indebted for having demonstrated the hæmostatic properties of hot water. Where ice and cold water were formerly used, hot water is now found to answer a better purpose. In hemorrhage from the uterus after miscarriage, or after removal of a fibroid, or from any other cause, injections of very hot water at the same time arrest the hemorrhage and promote contraction of that organ. This is one of the many applications of heat where experience has placed its value beyond a doubt. For the arrest of hemorrhage from an exposed surface, towels dipped in very hot water and pressed firmly on the bleeding part for a few minutes will generally act much more promptly and permanently than cold water used in the same way. A stream of very hot water thrown with a syringe into any bleeding cavity, if there are no vessels of large size, will generally prevent further flow of blood. The remarkably good effect of hot water for this purpose, during and after operations, may be witnessed every day in many of our hospitals. One great advantage, if there were no other, in favor of the use of hot water for exposed surfaces, or for the uterine cavity, is that the process of boiling is purifying, and one of the most reliable means of destroying organic matter, bacteria, or other minute organisms which are believed to play so destructive a part in the human body. A higher temperature than that of boiling water has been proven to destroy some germs which escape simple boiling. For that reason I always, if practicable, employ for antiseptic solutions and for surgical purposes water from the boiler of a steam-engine, which has usually been heated to about 250°.

The beneficial effects of vaginal injections of hot water are now generally appreciated, and form an important part of every-day gynecological treatment. So much depends upon the manner in which these injections are given, that I will venture to describe the method I consider the best. The patient should lie flat upon a bed or sofa, with the hips raised upon a broad bed-pan, capable of holding four or five quarts of water. With a Davidson's syringe, having a hard-rubber nozzle not perforated at the extremity, a stream of water as hot as can be borne, from 100° to 110°, should be gently thrown into the vagina for ten or fifteen minutes, or until three or four quarts of water have been used. The Davidson's syringe is better than the fountain; a bed-pan without pipes or openings or stop-cocks is better than a more complicated apparatus. It is difficult to keep the simplest vessel of the kind clean, and almost impossible some of the more complicated ones.

The effect of injections given thus night and morning is often quite surprising. The hot, swollen, congested mucous membrane or the vagina assumes a normal appearance, the offensive discharge ceases, the extreme tenderness disappears, the engorged cervix softens and diminishes in size, there is a marked general improvement without any medication whatever, and the patient has made a great step toward getting well. I make a rule of questioning a patient in detail as to whether she has taken her injection thoroughly. A pint or two of lukewarm water feebly thrown into the vagina, while the patient is sitting over a basin or other vessel, is often considered sufficient and expected to yield good results; but such a use of hot water for this purpose resembles the proper injection only "as the mist resembles the rain," and leads only to disappointment. In pelvic cellulitis the persistent use of hot water hastens the absorption of the plastic exudation and shortens the duration of the disease.

One of the applications of heat that may appear paradoxical, in view of what has been said of refrigeration in peritonitis, is the very common custom of covering the abdomen with hot poultices for the relief of the same disease. There is really nothing antagonistic in this. The object of the hot application is not to augment the heat of the parts, for there is already too much heat and congestion, but what the poultices and hot fomentations do is to stimulate the capillary circulation and that of the underlying lymphatics, and thus relieve the engorgement of organs more remote. Such applications are grateful to the patient, and that they often do much good there can be no doubt. I think that warm applications are useful, chiefly in the forms of peritonitis that develop rather insidiously, with pain over a large area. Where the disease is local, and especially of traumatic origin, I should prefer cooling measures from the beginning. There is nothing at all inconsistent in the use of both hot and cold applications at different stages of the same disease, and in the same case.

It would carry me beyond my limits even to enumerate all the familiar applications of heat in therapeutics. The value as a counter-irritant of Paquelin's cautery, used at a white heat and brushed lightly over the surface, is generally acknowledged. The application of heat over the region of the heart as a stimulant in threatening collapse, is often found of value, and I have utilized the rubber coil for that purpose; the medicinal use of hot water as a beverage reminds us that there is fashion in everything. More than one hundred and fifty years ago Le Sage, in his immortal "Dr. Sagrado," ridiculed the routine use of hot water and bleeding. The hot water has come back to us; the bleeding, as its adjunct, may follow.

In conclusion, I would suggest that as we have in heat and cold agents powerful enough to destroy life, and under proper control capable of modifying all its functions, they should always be prescribed with a definite object and used in a definite manner. As their use is often intrusted to those who know nothing of the principles on which they act, and who are influenced by custom or prejudice, the physician should take suitable opportunities of imparting some general information to his patients as to the most rational means of employing remedies that, however or by whomsoever prescribed, will always be considered the property of the household, and within the province of domestic practice.

A RARE FORM OF LOBAR PNEUMONIA—TUBERCULOUS CROUPOUS LOBAR PNEUMONIA.

By FRANCIS P. KINNICUTT, M.D.,
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F. H——, male, aged thirty-three, single, native of England, was admitted to my service in St. Luke's Hospital March 6, 1884. Family history not obtainable. The patient states that he has never suffered from any pulmonary affection. Eighteen months ago he was injured in a railway accident, and has been troubled since that time with a continuous "to and-fro movement of his head," which he has been told ceases during sleep. During this period he has lost flesh. He has had no cough or hemorrhage, and was apparently in good health until three days before admission to the hospital, when he had several sharp chills, followed by cough and a thickish expectoration and apparently fever. On admission to hospital patient was fairly well nourished; temperature, 104°; pulse, 100; respirations, 38. There was cough; the sputa were viscid, but not rusty. There was a constant rhythmical to-and-fro movement of the head, which ceased during sleep. Examination of the chest showed dulness, with feeble respiratory murmur and abundant fine inspiratory crepitation over the infra-clavicular region and upper portion of the mammary of the right side. The urine was acid, specific gravity 1.028, and was free from albumen and sugar. The chest was very carefully examined by me daily. The physical signs of consolidation of the entire

upper lobe of the right lung (marked dulness, bronchial respiration, and bronchophony) rapidly supervened; there was continuous pyrexia; the pulse-respiration ratio of one to a little less than three was maintained. Until the eighth or ninth day of the patient's illness the clinical course of the disease in all respects corresponded with an ordinary attack of croupous lobar pneumonia, and was so regarded by me. Resolution, however, did not occur at the customary period; there was, on the contrary, from the ninth day after admission to hospital until death, a gradually increasing pyrexia, pulse, and respiratory rate. Examination of the chest, moreover, revealed a very rapidly developing disintegration of lung tissue at different points in the affected area. On the thirteenth day there were the physical signs of a small cavity in the upper portion of the consolidated lobe, corresponding to the site at which the largest excavation was found after death

During the last days of life slight hæmoptyses occurred, and there was effusion into the right pleural cavity. A similar case had never before been observed by me, but from the clinical course of the disease I finally was led to believe, and expressed the opinion, that the morbid process might well be expressed by the term tuberculous croupous lobar pneumonia. The patient died on the sixteenth day after admission to hospital, on the nineteenth from the first symptoms of acute illness, with the signs of general pulmonary œdema and heart-failure.[1]

The autopsy was made by Dr. Ferguson in my presence. The morbid changes were confined to the brain, the spleen, and the lungs. There was marked atrophy of the convolutions over the vertex. The spleen was large and soft. The right pleural cavity contained about forty ounces of semi-purulent fluid; the pulmonary pleura was covered with recent fibrin. The left lung was intensely congested and œdematous; the entire upper lobe of the right lung was hepatized. On section the solidified portion appeared dry, smooth, and grayish in color and homogeneous in consistency throughout. The cut surface did not present the granular appearance of gray hepatization, and the edge of the knife carried over it did not remove the alveolar contents. Numerous miliary tubercles could be distinguished at the periphery of the consolidation. The middle lobe and the upper portion of the lower lobe contained numerous miliary tubercles. There were several small cavities in the consolidated portion, varying in size from that of a pea to a walnut, partially filled with material not completely disintegrated. In sections, the alveolar walls were seen to be slightly thickened and the alveoli to be distended with pus, a small amount of fibrin, granular material and epithelial cells similar in appearance to those lining the alveolar walls in the normal state. The alveolar contents in places had undergone cheesy degeneration. These areas of cheesy degeneration, which were numerous throughout the consolidated portion of the lung, were limited by zones of small round cells of inflammatory origin. In some of the caseous areas the alveolar septa were still preserved, but very generally they had disappeared in these areas, a fusion of many alveoli having occurred. In the neighborhood of the solidified portion there were numerous miliary tubercles and tuberculous masses with broken-down centres; in both, giant cells were well developed and abundant. In the interstitial tissue of the lung surrounding the tuberculous masses numerous small cells, both round and fusiform, were seen. Tubercles were not found in the other organs.

The pathological changes above described would seem to justify the application of the term tuberculous croupous lobar pneumonia to the morbid process. An apparently similar morbid process has been described by pathologists, but I have been unable to find *any clinical record* of such cases, with the exception of a general reference to them by Rindfleisch and a very brief report of two cases communicated to the French Academy of Medicine, December 4, 1883, by Professor Sée, under the title of "Phthisis in the Form of Lobar Pneumonia." I give the latter as reported in *Le Progrès Médical* of December 8, 1883:

Case I.—A young man, nineteen years of age, a hospital patient, was seized on September 13th with a well-marked attack of simple pneumonia, which involved the upper two-thirds of the right lung. At the end of the ninth day, defervescence not having taken place, the sputa were examined and bacilli in great numbers discovered. Early in October all the signs of an excavation became apparent.

Case II.—A patient in the same hospital ward presented all the signs of a simple pneumonia, which, however, did not undergo resolution. The sputa were twice examined, revealing only ordinary microbes in great numbers. A third examination established the presence of a small number of tubercle bacilli. Shortly afterward the local signs confirmed the diagnosis.

Rindfleisch,[2] under the head of "Cheesy Lobar Pneumonia," describes a form of desquamative pneumonia (Buhl) which occurs as a diffuse inflammation of an entire lobe affected by tuberculosis. "Usually the earlier stages of the disease have already passed by at the apex of the lung and cavities have formed, when a sudden attack of cheesy pneumonia occurs and involves at once the rest of the upper lobe. This usually happens with an acute exacerbation of all the clinical symptoms, the fever, dyspnœa, and rapid pulse, so that the impression is given of an intercurrent croupous lobar pneumonia, and the first glance at the lungs might seem to confirm this opinion, for, as Virchow has shown, there are very often in the alveoli plugs of real fibrinous exudation, so that the section of the lung looks granular. But the distinction lies in the infiltration of the alveolar walls, a condition very slightly developed in croupous pneumonia."

I prefer to regard the morbid process observed in my own case, and which has been carefully described, as an example of an intercurrent *croupous pneumonia*, from the presence in the alveoli of the usual products of such an inflammation—*e.g.*, pus and fibrin—which Buhl[3] insists are *never present* in the desquamative pneumonia first described by him. The implication of the alveolar walls and the presence of only a small amount of fibrin among the alveolar contents I shall again refer to.

The question of the probable period of the development of tubercles in the above case is certainly an open one. Personally, I am inclined to believe that a slight deposition of tubercles occurred at some time previous to the beginning of the patient's acute illness, but that little or no constitutional disturbance was produced thereby. The history of the patient, the clinical course of the acute disease as observed by me, and finally the post-mortem appearances, would seem to justify the opinion that on the date of the recorded chills a true croupous pneumonia was developed in the tuberculous lobe of the lung; that the pneumonic process furnished suitable soil for a very rapid and abundant development of the bacilli tuberculosis; that there was a consequent equally rapid degeneration of the tubercles of older date, and also of the pneumonic products. The objection to considering the pneumonic process a croupous one on account of the serious involvement of the alveolar walls, may be met by the argument that such an implication is believed by many pathologists to occur in cases of croupous pneumonia where resolution is delayed. The presence of only a small amount of fibrin among the alveolar contents may be explained in a similar manner; degenerative changes are to be expected where life is prolonged to the nineteenth day from the beginning of the attack.

[1] The sputa were not examined until the fourteenth day; two specimens were then examined, but tubercle bacilli were not found. On the fifteenth and sixteenth days the sputa were so scanty that specimens could not be obtained for examination.

[2] Cyclopædia of Medicine, von Ziemssen, vol. v., p. 673.

[3] Buhl: Lungen Entzündung, Tuberkulose und Schwindfüchtig, p. 50. München, 1872

MORPHIA IN CARDIAC DISEASE.

By BENJAMIN EDSON, M.D.,

BROOKLYN, N. Y.

THE following case seems to have some bearing upon the use of morphia in one form of disease of the heart.

C. R——, fifty-six years of age, Scotchman, merchant, called at my office early in November, 1883, complaining of a troublesome cough and shortness of breath on exertion. He attributed his trouble to "catching cold" from exposure. As he was in great haste I prescribed a cough mixture without making thorough investigation.

A few days later he called again. His cough was no better, and his respiration so much more difficult that he could not lie down to sleep. When I proposed an examination, he slapped his hand upon his chest, saying: "There is nothing the matter with me here, sir: I'm as sound as a dollar." I found, however, that he had mitral regurgitation with marked dilatation of the heart. The cause of the cough and dyspnœa was but too apparent. The kidneys were not affected, and as yet there was no œdema. A few days later the legs began to swell. I advised him to keep strictly quiet, and at the same time put him upon such treatment as seemed best calculated to give relief. I found it difficult to convince him of the grave nature of his disease, and being of a nervous, active temperament, he considered it a great hardship not to be permitted to attend to his daily business in New York. Finally I persuaded him to consult Dr. Armor, who confirmed my diagnosis and approved the treatment, which "must be palliative and on general principles."

For the next two or three weeks he continued fairly comfortable, the œdema moderate, but he was able to sleep only as he reclined in his chair. He was very irritable, and urgently called for something that would enable him to sleep *in bed*. I did not feel warranted in granting this request, but still he insisted that he must have some good sleep. Finally, through the persuasion of a relative, he was induced to call in a distinguished homœopathic physician, who acceded to his request and gave him sufficient morphia to enable him to sleep several hours in bed. But on waking and attempting to rise he was seized with dyspnœa that nearly terminated his life. By vigorous efforts on the part of his attendants he eventually rallied somewhat, but soon after he suddenly fell back and expired.

I have considered that death in this case was due to the morphia used. It may have been only indirectly the cause, by permitting the patient to assume the recumbent position, rising from which produced over-distention or overwhelming of the weakened heart-structure. Morphia may have contributed to the paralysis. Bartholow ("Materia Medica," 5th ed., p. 524) says of lethal doses of morphia, that "in some instances very sudden death ensues from paralysis of the heart." How large the dose required to produce this untoward result obviously depends much upon the condition of the heart. What in health might be but a medicinal dose of morphia, in case of dilatation, with muscular walls greatly weakened and nerve-distribution disturbed, might readily prove to be a lethal or paralyzing dose. Thus in this case it is not improbable that both these factors conduced to the sudden death of the patient.

This man had never had rheumatism, and previous to this illness there had never been any suspicion of cardiac trouble.

In looking back over this case there arises a question which leads to speculation, and which may not be wholly devoid of interest. In the summer of 1880, through some business complications, this man had a period of very great mental depression. It took the form of marked pathophobia. He was fearful that he would drop down dead, and that his body would be unrecognized and sent to the morgue, so he was very particular to keep in every pocket papers bearing his name and address, with minute directions as to what should be done in case of the event he so much feared. Scores of times daily he took out these papers and examined them to reassure himself that, if he did drop dead, his body could be properly identified. On one occasion, being up-town in New York, the "feeling" came over him that he never could get back to his store alive. His evil genius told him that he must not ride, and he had not the power to walk. In this dilemma it was finally revealed to him that he could perchance *run* back. This he did, by short runs between lamp-posts and awning-posts, to each of which he would cling while screwing up courage to make a bold run for the next goal. In this way he finally reached his store, out of breath and reeking with perspiration.

While narrating these and many other freaks of his malady equally ridiculous, he remarked, "You may laugh at them; I do now; but when the incubus is upon me I am a coward, a victim of my fancies." After a few weeks his business troubles passed away, and with them his morbid fear of death.

There is a possibility—indeed, is there not a strong probability?—that at this time there was actual heart-trouble. If so, whether it stood in the relation of cause or of consequence is of course mere speculation. Is pathophobia, with the kindred affections, agoraphobia, etc., simply a functional derangement—a neurosis—or may it not be associated with and possibly dependent upon actual pathological conditions?

Reports of Hospitals.

COOK COUNTY HOSPITAL, CHICAGO, ILL.

CASE OF CONGENITAL DIAPHRAGMATIC HERNIA.

REPORTED BY M. L. HARRIS, M.D., HOUSE PHYSICIAN.

E. C——, male, aged thirty-four, laborer, was received into the hospital November 15, 1883, under the care of Dr. F. Henrotin, attending physician.

On admission the patient was much prostrated and suffered from intense dyspnœa; hence no accurate account of his history was elicited. He said that he had usually enjoyed good health, and that this was his first acute illness. The case was found to be one of acute croupous pneumonia affecting the lower lobe of the right lung and complicated with an acute pleurisy of the same side. November 17th the patient died suddenly and unexpectedly.

The autopsy was held forty-eight hours after death by Dr. W. T. Belfield, pathologist to the hospital.

Body of spare build, the abdomen markedly depressed. After the usual incision from chin to pubes and removal of the sternum, the appearance represented in Fig. . was exhibited. The heart was in about the usual position, the apex a trifle nearer the sternum than normal. The right pleural cavity contained some recently coagulated lymph. The inferior and middle lobes of the right lung exhibited gray hepatization; the lower portion of the upper lobe showed red hepatization; the upper portion of this lobe was quite œdematous.

The left pleural cavity contained, besides the left lung, the stomach, nearly all of the small intestine, part of the colon, and half of the pancreas. The lung, eight inches in length, one to two inches in thickness, and two to three inches in breadth, was crowded into the anterior and upper portion of the left chest, resting against the mediastinum. It appeared to consist chiefly of the upper lobe, which, with the exception of a few cheesy nodules in the apex and some slight œdema, was fairly normal, crepitating well and floating upon water. The inferior lobe was crowded into a small firm mass which contained no air and sank in water.

The abdominal cavity was shallow, containing only

the liver, kidneys, spleen, a small portion of the ileum and ascending colon, and the descending colon. The liver was slightly enlarged and fatty; the anterior border of the right lobe extended downward four fingers'-breadth below the margin of the ribs, its deep position being due not to an increase in size but to a tipping forward and downward of the organ. The kidneys and spleen occupied their normal positions respectively and appeared healthy.

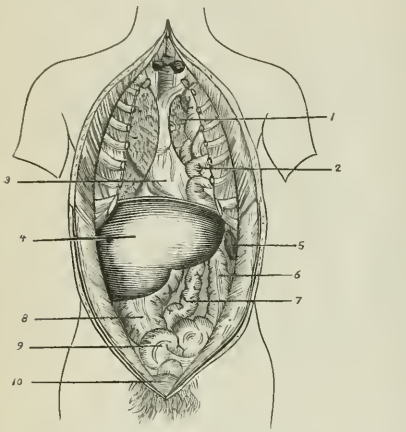

FIG. 1.—1, Left lung; 2, convolution of small intestine; 3, heart in sac; 4, liver; 5, spleen; 6, descending colon; 7, lower end of ileum; 8, cœcum; 9, sigmoid flexure; 10, bladder

The diaphragm presented a single large opening occupying its central and posterior portion, through which the various organs—inferior vena cava, aorta, thoracic duct, portal vein, small and large intestine, pancreas, superior mesenteric artery, etc.—passed to or from the thorax. This foramen was large enough to permit the

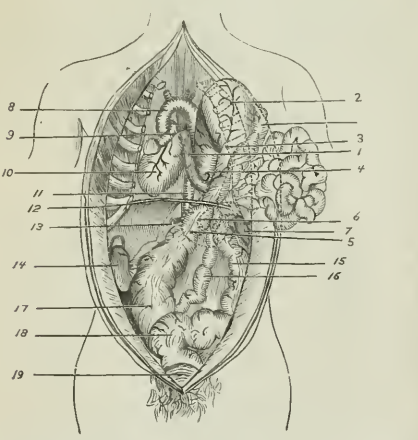

FIG. 2.—1, Œsophagus; 2, stomach; 3, pylorus; 4, cardia; 5, duodenum (dotted line); 6, pancreas (dotted line); 7, spleen; 8, arch of aorta; 9, pulmonary artery; 10, heart (drawn to right); 11, descending aorta; 12, diaphragm; 13, cut end of portal vein; 14, kidney; 15, descending colon; 16, ileum; 17, cœcum; 18, sigmoid flexure; 19, bladder.

passage of the closed fist. The left border of the right crus arched to the left, forming the free margin of the foramen; this was round and smooth and attached to the head of the twelfth rib and to the base of the transverse process of the twelfth dorsal vertebra. There was no left crus. The course and relations of the alimentary canal are shown in Fig. 2. Here the lungs and liver have been removed, the heart drawn to the right and the small intestine to the left, the ribs represented by the dotted lines.

The œsophagus passed behind the arch of the aorta, along the anterior and right side of the descending aorta, until it reached the eighth dorsal vertebra, where it passed in front of the aorta, suddenly turned vertically upward, and after a course of about two inches entered the cardiac extremity of the stomach. The stomach itself extended from this point upward to the apex of the thoracic cavity, then curved forward and downward, so that the greater curvature looked backward and upward, the lesser forward and downward. The duodenum commenced opposite the third intercostal space in front, passed down through the opening in the diaphragm into the abdomen, making a loop about eight inches in the abdominal cavity, in which lay the head of the pancreas; thence it passed back through the opening into the thorax. The remainder of the small intestine lay within the thoracic cavity, with the exception of about twelve inches of the inferior extremity of the ileum, which passed through the opening in the diaphragm into the abdomen toward the right iliac region, where it joined the cœcum, the latter occupying nearly its normal position.

The ascending colon passed directly into the thorax in front of the duodenum; the transverse extended along the left side of the stomach and entered the abdomen again; the descending colon occupied nearly its normal position. The rectum descended along the centre of the sacrum.

The pancreas lay directly in the opening, half within the abdomen and half within the thorax. The cœliac axis and mesenteric arteries were given off at their usual site. The gastric branch of the former and the superior mesenteric passed upward into the thorax, the splenic and hepatic branches directly to their respective organs. The portal vein descended through the opening to the liver. The genito-urinary tract was normal.

ST. CATHERINE'S HOSPITAL, BROOKLYN, N. Y.

CASE OF RUPTURE OF THE DIAPHRAGM.

REPORTED BY JAMES L. KORTRIGHT, M.D., CURATOR.

SIMON S——, fifty-eight years of age; German. Patient fell or sprang from the top of a three-story building. He alighted upon his feet and immediately fell prone with great force. He died three minutes after admission, and half an hour after the receipt of the injury. At the autopsy there was found a contusion in the frontal region without fracture of the skull or injury to the brain; a compound Colles' fracture at left wrist; a simple fracture at lower third of right femur; a simple fracture of the neck of the left femur; fractures of the costal cartilages of third and fourth ribs on the right side, and of the fourth, fifth, and sixth ribs on the left side. There was a large rent three inches in length across the muscular fibres of the left side of the diaphragm half an inch from their insertion into the central tendon. Through this rent there was a hernia of the entire stomach and transverse colon with the greater omentum. The stomach was distended with food and contused on its anterior wall. The heart was displaced to the median line, and stood vertically. Has any one ever seen a similar injury or known of a case where the abdominal viscera were driven through the diaphragm?

A SUCCESSFUL WOMAN PHYSICIAN.—*L'Union Médicale* gives an account of the career of a Parisian doctress who, after her school and hospital experience, went to Turkey, and after many adventures was made physician to a prince's harem, on a salary of 100,000 to 150,000 francs a year. This was "the bouquet of her adventurous existence." She subsequently lost this position but made amends by making a marriage *de haute convenance*.

Progress of Medical Science.

Removal of a Foreign Body from the Knee.—M. Boudet relates the case of a child who inserted a threaded needle into the knee at the internal border of the patella. An attempt to extract the needle by pulling on the thread resulted only in breaking the latter. An incision was then made, and although the needle could be easily felt in the tissues it could not be removed. It was finally proposed to place the child in the same position it occupied when the object was introduced. This was done and the needle was extracted with ease. Ambroise Paré practised a similar manœuvre when the King of Navarre was wounded by a ball in the shoulder at the siege of Rouen. The other surgeons having failed in their efforts to extract the bullet, Paré advised the illustrious patient to assume the same position in which he was at the time of receiving the wound. He did so, and the removal of the foreign body was accomplished with facility.—*Revue Médicale*, No. 32, 1884.

Treatment of Ozœna.—The following is the formula employed by M. Vidal at the Hôpital St. Louis, in the treatment of ozœna (*Journal de Médecine et de Chirurgie Pratiques*, August, 1884): Solution of chloride of zinc (5 per cent.), 1 ounce; boracic acid, 15 grains; water, 28 ounces; ammonia, q. s. to neutralize the fluid. A little of this solution is snuffed up into the nostrils several times a day. M. Gorecki employs for the same purpose, and in the same way, a warm saturated solution of boracic acid. By means of one or other of these preparations the fetid odor may be destroyed, in most cases, within a few days.

Encephalic Bellows Murmur in Children.—This sound, when it exists, is intermittent and isochronous with the cerebral pulsations. It is often perceptible over the anterior fontanelle only. According to Dr. Jurasq, this phenomenon is of no diagnostic value, but occurs at any time between the third month and the sixth year of life. The sound seems to be produced in the carotid canal or in the foramen spinale. These foramina vary greatly in diameter in children, and the bruit results from a disproportion between the calibre of the osseous openings and that of the internal carotid or middle meningeal arteries which traverse them.—*Revue Médicale*, August 30, 1884.

Clitrophobia.—By this term is understood a disturbance of the cerebral functions, somewhat similar to agoraphobia. The subjects of this affection have a horror of being in any enclosed place. When shut up in a room they experience a sensation of heat in the head, the arteries of the temples beat forcibly, they become furious and make frantic attempts to open the door or to leap from the window. Clitrophobia may exist as a pure monomania unaccompanied by any other delirious manifestations, or it may occur in connection with other psychological disturbances. It is a rare condition, and the prognosis should, in every case, be a reserved one. —*Revue Médicale*, No. 35, 1884.

Inhalation of the Vapor of Glycerine for Cough. —Professor Trastor employs with great benefit the vapor of glycerine for the alleviation of a fatiguing or painful cough. A couple of ounces of glycerine are put in a porcelain dish and evaporated over an alcohol lamp. A large quantity of vapor is thus given off which is inhaled with great relief by patients, especially consumptives who are troubled with a harassing cough.—*Revue Médicale*, August 30, 1884.

Ecchymosis of Nervous Origin.—In an interesting paper published in the *Revue de Médecine* of August 10, 1884, Dr. Keller relates a number of cases observed by him of ecchymosis occurring, without the intervention of traumatism, in nervous subjects. He came to the conclusion that, as in similar cases stated by Straus to occur in locomotor ataxia, the ecchymoses were directly dependent upon the abnormal condition of the nervous system in these patients, and this view was strengthened by the fact that the spots appeared less frequently in proportion as improvement occurred in the nervous condition. The patients were all women, and their condition varied from simple nervousness to hysteria and melancholia. Some were also of a rheumatic diathesis. Dr. Billod informed the author that he had observed spots of ecchymosis on the dead bodies of persons who had suffered from melancholia. This phenomenon of the spontaneous occurrence of ecchymosis in nervous women is a fact possibly of some importance in a medico-legal point of view.

Gummy Tumor of the Tongue occurring Forty-three Years after Infection.—Dr. Pellizzari relates the case of a man, sixty-five years of age, who in 1840 had a chancre, followed by pains in the head and bones, an eruption of the skin, and mucous patches in the mouth. He was treated with iodides and mercury, and was apparently cured. He married in 1855, had four healthy children, and enjoyed excellent health up to November, 1883. At that time a hard nodule appeared on the left side of the tongue anteriorly. This was followed by others, which soon became confluent and formed an elongated tumor. These neoplasms were at first hard, then became softened and finally ulcerated. When the patient presented himself for treatment, the tip of the tongue was indurated and showed three points of ulceration. There was no glandular engorgement. Under mercury and iodide of sodium the ulcers healed and the induration diminished very markedly.—*Journal de Médecine de Paris*, August 30, 1884.

The Reduction of Paraphimosis.—The following is the method successfully pursued by Dr. Zakharevich in the reduction of a number of cases of paraphimosis (*L'Abeille Médicale*, No. 32, 1884). After carefully anointing the strangulated parts with oil or vaseline, he places the tips of the thumb and fingers on the glans so as to completely surround it, and then makes firm and gradual pressure. After three or four minutes of this steady pressure, as a rule, the glans is reduced to its normal size. Then, the pressure being maintained by the thumb, the ring, and little fingers, the constricting ring is grasped by the index and middle fingers and the prepuce in this manner drawn down. Reduction is thus accomplished easily and quickly, the most difficult case having required but fifteen minutes for its cure. In the cases treated by him the ages of the patients varied from three to fifty-seven years, and the duration of the condition from twelve hours to thirty days.

Naphthol in the Treatment of Scabies.—Dr. Samuel Rona has treated a number of cases of itch by a ten to twenty per cent. solution of naphthol in oil. If chronic eczema coexist the solution should not be stronger than two or three per cent. In upward of a hundred cases in which the remedy was tried the author never saw any symptoms of poisoning, the only effect of using too concentrated solutions being the production of eczema. The application should be made in the evening, all the parts affected with scabies being thoroughly rubbed with the preparation. The next morning the patient takes a bath, and all the surface reddened by irritation of the naphthol is dusted with rice powder. Usually one application is sufficient for a cure. Sometimes an intense itching persists for some days, but this was attributed to the coexisting eczema.—*La France Médicale*, September 2, 1884.

The Relation between the Ankle Clonus and the Patellar Reflex.—In cases in which the ankle clonus is very marked, as in old hemiplegia or in tabes, it coexists ordinarily with an exaggerated patellar tendon reflex. Certain authors, struck with this coincidence, have referred both phenomena to the same cause and look upon them as of identical semeiological value. This view is opposed by M. de Fleury (*Revue de Médecine*, August, 1884), who asserts that in a large number of

cases the foot phenomenon is met with when the patellar reflex is normal or even abolished. He relates a number of instances in proof of this assertion. He also made some experiments showing that, in cases in which the ankle clonus and exaggerated patellar reflex coexisted, the former could be made to disappear while the foot and knee tendon reflexes persisted. This was done by making the affected member anæmic by means of an Esmarch's bandage. He concludes, therefore, that those who maintain an identity of causation of these two phenomena are in error, and that the ankle clonus is to be explained in some other way.

The Treatment of Snake-Bites.—Mr. J. Mildred Creed, in a paper read before the New South Wales Branch of the British Medical Association (*Australasian Medical Gazette*, No. 10, 1884), states as his belief that many of the alarming symptoms following a snake-bite are due rather to fright, pure and simple, than to the poison received from the fangs of the snake. He relates a number of cases in support of this assertion. The bite had been promptly excised in every case, and only two of the patients presented any alarming symptoms. In one of these cases the patient recovered speedily on being assured that there was no cause for fear, although she had a short time before been apparently at death's door. The other case was simply one of profound intoxication resulting from the large amount of brandy which had been given as an antidote. The author also relates several other cases of people who had died of fright after being bitten by non-venomous reptiles. He does not believe that there is any physiological antidote to snake poison, and thinks that the only effectual means of averting serious consequences is by the prevention of the absorption of the poison. This is best done by the early stoppage of the circulation in the wounded limb by the application of a strong ligature, and the excision of the bite. The reckless administration of alcohol the author condemns as not only useless but harmful. He recommends the administration of ether by inhalation as answering a double indication, that of slight stimulation and of removing the feeling of dread by inducing unconsciousness. The ether should be administered for one or two hours, when the patient may be allowed to recover sensibility to such an extent, as to enable the surgeon to judge of his condition. After this, should it be necessary, he might be again brought under the influence of the anæsthetic and kept there as long as desired. Any other symptoms which may arise are to be treated according to general principles.

The Micrococci of Dysentery.—At a recent meeting of the Medical Society of the Caucasus, Dr. Gaudelin, of Tiflis, exhibited micro-organisms found by him in the intestine and liver of patients dead of dysentery. The micrococci were found in great numbers in the digestive tube, covering the surface and penetrating all the tunics of the intestine. They were especially numerous within and about the veins of the sub-mucous layer and in the muscular coat. In the liver they filled the capillaries and the branches of the portal vein. The author also found bacilli in the mucous and submucous layers of the large intestine, but not elsewhere.—*Journal de Médecine de Paris*, August 30, 1884.

Mild Forms of Typhoid Fever.—Laffoni thus classifies the milder forms of typhoid fever: Forms slight by their duration, forms slight by their intensity, and a third class slight by duration and intensity. Of forms slight as to their duration, constant symptoms are: splenic tumefaction, bronchial catarrh, and fever. The course of this last characterizes the different varieties. The temperature either, as in ordinary attacks of typhoid fever, has three well-marked stages—period of ascending oscillations, stationary period, and period of decline—or is limited to one or two of these stages only. In some rare cases the fever assumes the course of a quotidian intermittent, without repeated rigors or sweats. Of the forms slight by intensity, the duration may be long. These either approach the classical type, or are irregular when the fever is subcontinuous or intermittent, or is partly continued, partly intermittent. Splenic tumor is a constant symptom. These slight forms must be considered due either to a small dose of the poison or to its exhausted activity, or possibly to the mode by which it gained access to the organism, as well as to the conditions of receptivity or organic resistance of the patient. The anatomical alterations are identical with those of ordinary typhoid fever. There is no constant relation between their extension and the intensity or gravity of the clinical form. The diagnosis is very important, especially as regards prophylaxis. It is often very difficult. The splenic tumor, rash, pain in the ileocæcal fossa, evening headache, apathy of the patient, bronchial catarrh, often good appetite, notwithstanding the fever, pulse small, and very often dicrotic, are the chief elements of a sure diagnosis. The prognosis in children is good; in adults it is subordinated to the docility of the patients and to the possibility of complication; in old people, it is always more doubtful. As to treatment, the author recommends calomel for the first three or four days, then mineral acids or benzoic acid. Except the general or partial cold bath, antipyretics, especially in cases of long duration, are harmful or useless.

Abscess of the Cerebellum Consecutive to Otitis Media.—In a communication addressed to the Society of Anatomy and Physiology of Bordeaux (*Journal de Médicine de Bordeaux*, August 24, 1884), Dr. E. Capdeville relates the case of a woman, twenty-four years of age, admitted to hospital suffering from obscure cerebral symptoms. She lay, always on the left side, in a state of semi-stupor, vomiting occasionally, and complaining of an intense general cephalalgia. She had a discharge from the right ear dating back seven months, and recently an abscess had formed and opened spontaneously over the tip of the right mastoid process. At the autopsy the lesions of otitis media with condensing osteitis of the mastoid process were found. The meninges, cerebrum, and sinuses of the brain were all normal, but in the right lobe of the cerebellum was an abscess containing over three ounces of pus. The mode of propagation of the inflammation from the ear to the cerebellum could not be discovered, and possibly the latter may have been merely coincidental and independent of the otitis.

Iodine Injections in Hydrarthrosis of the Knee-Joint.—Dr. Douglas Morton, in *The American Practitioner*, July, 1884, speaks very highly of iodine injections into the knee-joint for the cure of hydrarthrosis. He bases his favorable opinion on the excellent results obtained in four recent cases of this kind. The views of most surgical authorities are against all such procedures, as may be seen from the following extracts: "I have not been so bold as to use injections for the permanent cure of this affection, convinced that the practice must be fraught with danger" (Gross). "Tapping, iodine injections, etc., notwithstanding considerable testimony in their favor, are remedies of doubtful propriety" (Hamilton). "This mode of treatment has been used with great success by several European surgeons; as, however, the plan is necessarily attended by some risk, it should not be employed except in very chronic cases which have resisted other modes of treatment. . . . Even the simple use of the aspirator in these cases is attended with some danger, as shown by fatal results which have occurred in the hands of Dubreuil, and of McDonnell, of Dublin" (Ashhurst). "In very chronic and obstinate cases paracentesis of the joint by means of the aspirator has been employed with marvellous success. Sir J. Fayrer was one of the strongest advocates" (Bryant). "But when these (the usual remedies) have failed . . . the joint must be injected with iodine. Care must be taken to exclude air. . . . The case may be converted into one of acute abscess. But generally

it does well, and the patient recovers with more or less stiffening" (Holmes). "The results of this operation (injecting iodine) may be divided into four classes: (1) Complete cure with preservation of mobility; (2) cure with certain amount of stiffness; (3) complete failure; (4) suppuration and injury to joint. The first and fourth classes are uncommon. The operation should not be done except after trial and failure of other remedies" (Panas, quoted in Holmes' "Surgery"). "Dangerous both to life and limb, and can very rarely be justifiable" (Keetley). "If these means fail, and the absence of false bodies and osteophytes has been verified, the joint may be injected with iodine" (Barwell). "If these means fail, we have a very powerful method of cure at our command in the injection of the joint with tincture of iodine. This plan, a sufficiently bold one, has been much employed by Jobert, Velpeau, and Bonnet. . . . According to the statement of the French surgeons, it has in no case been followed by any serious consequences, but in several instances by a complete cure without ankylosis. . . . In one case of hydrarthrosis of the knee in an old man, in which I employed it, about six ounces of thin synovia were drawn off and a drachm of strong tincture of iodine was injected. Slight inflammation ensued, and the disease, which was of two years' standing, was completely cured. The chief points that appear to require attention are that no inflammation be going on at the time, there being no tenderness or pain in moving the joint, the effusion being quite passive and of a very chronic character, and above all that no air be allowed to enter with the injected fluid" (Erichsen). "Iodine injections in hydrarthrus are made by few surgeons. I have seen them made three times and have made two, always with good results. . . . Cases have also occurred where severe inflammations of the joint have resulted after these iodine injections, which have been most used in France because they are a French invention (of Bonnet and Velpeau); as so often happens in traumatic articular inflammations, the acute serous synovitis often becomes purulent. . . . It is always dangerous to joint and to life, and hence should be done as rarely as possible" (Billroth).

Dr. Morton believes that the prejudice against the operation prevailing in the minds of most surgeons consists of the too lingering remains of a belief long dominant in the professional mind, that the joints, and particularly the knee-joint, could not be surgically interfered with except at great risk. Now that we have learned, especially from McEwen and Ogston, how very tolerant are the joints of the knife and the saw; and since we hold it to be so light a matter to throw iodine into the tunica vaginalis, it does appear anomalous that any one, on any supposed general principles, should consider it highly dangerous to inject iodine into the synovial sac of the knee-joint.

Stress has been put upon the danger of admitting air. The author can understand how importance should have been attached to such an accident before the days of antiseptic surgery. But now he cannot, and in his own operations air was admitted freely—so much so, that when the injected iodine was forced out by pressure a multitude of air-bubbles would come with it. He took pains to bring the iodine in contact with as much of the membrane as had been touched by air, and by this, he believes its admission was rendered perfectly harmless, and therefore made no special effort to prevent it. Without the use of iodine or some other powerful disinfectant, he should regard admission of air into the joint dangerous, and believe it very probable that the fatality occurring in the practice of McDonnell and Dubreuil, mentioned by Ashhurst, was due to this cause. It was said by Volkmann, in his address on antiseptic surgery before the International Congress in London, that results in surgery were no longer involved in the uncertainty of former times. Then the work of the surgeon was like that of the agriculturist, dependent in its issue upon conditions which he could neither anticipate nor control; but now, it is rather like that of the skilled mechanic, the conditions of whose work are largely subject to his control and from whom we may confidently expect results. Dr. Morton does not know that this is true to the full extent of the analogy, but this is certain, that the striking statement places surgery downrightly upon the basis of the inductive method, upon which alone substantial progress is possible. In making a practical application of this method of reasoning to the question before us, he thinks we may safely conclude that two points are definitely and finally settled: first, air may be freely admitted into a synovial sac and no harm result; and, second, undiluted officinal compound tincture of iodine may be safely injected. Any doubt as to these particular points may be regarded as forever eliminated from the question, which is now narrowed down to conditions belonging to the patient's state of health and to his surroundings. Diseased kidneys or bad hygienic conditions rendering the result of any surgical operation doubtful may lead to disaster here. But these conditions may be ascertained by reasonably careful investigation; and, after failing to find any unfavorable condition, we may operate with the expectation of a good result.

The Detection of Mercury in the Urine.—According to Dr. Schuster the ordinary tests are of no value in the detection of very minute quantities of mercury in the urine. He recommends the treatment of the fluid to be examined according to the plan proposed by the chemist Herr Schridde. The urine is acidulated by muriatic acid and submitted to a current of sulphuretted hydrogen and then set aside to stand for twenty-four hours. The sediment which forms contains sulphide of mercury, uric acid, mucus, etc. This is separated by filtration, and both the filter and the sediment which it retains are treated by nitro-muriatic acid, and then dried until no more nitric vapors are given off. The residue is then dissolved in a small amount of water and the solution, slightly acidulated, is treated by the ordinary method of Fürbringer. By this procedure it is possible, Dr. Schuster says, to detect $\frac{1.5}{10.000}$ grain of mercury. *Archives Médicales Belges*, July, 1884.

Typhoid Ulcerations of the Throat.—The following are the conclusions of a memoir read by Dr. E. Rapin before the Medical Society of Geneva: 1, the frequency of the occurrence of typhoid lesions in the fauces is greater than most authors admit; 2, typhoid fever may begin with a sore throat accompanied by indolent ulcerations; 3, the ulcers are superficial, rounded or oval, with slightly elevated borders, and indolent, their seat of predilection is on the anterior surface of the uvula and the anterior pillars of the fauces; 4, the diagnosis is usually difficult, and can only be determined with certainty by observing the general symptoms and the course of the disease; 5, the lesions which characterize them are referable to the lymphatic system; 6, these lesions are identical with those observed in other organs in this disease, and they indicate an identical pathogenesis; 7, they are due to the direct penetration of the micro-organisms of typhoid fever into the follicles of this region.—*Revista de Medicina y Cirurgia Práticas*, August 7, 1884.

Fracture of Inferior Maxilla Treated with Silver-wire Suture.—Dr. J. Craig Miller, of Lake City, writes: "John R——, a miner at the Ulé mine, was thrown from the bucket and fell about fifteen feet. His inferior maxillary bone was fractured at the symphysis. I was sent for (four miles) and arrived about two hours after the accident; found the left half displaced downward about half an inch. It was replaced without difficulty and the teeth firmly fastened together with silver wire, and lead-water and laudanum applied. No other treatment. I thought the wire would be sufficient, as the seat of the fracture was directly in the centre, and it has proved so. The man is over forty years of age."

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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THE AMERICAN PUBLIC HEALTH ASSOCIATION.

THIS body is to meet in its twelfth Annual Session at St. Louis, Mo., on October 14th inst. The session promises to be one of unusual interest, both on account of the locality where the meeting is held, and the importance of the subjects which will be discussed. It is the first time that the Association has held a meeting in what may properly be called "the West." If we may judge by the busy note of preparation for the meeting which reaches us, and the past reputation of the great metropolis of the West for munificent hospitality, the forthcoming session of the Association, at St. Louis, will be on a scale of grandeur hitherto quite unknown to that hard-working body.

All experience proves that however royally any city entertains this Association, it reaps one hundred-fold benefit from the influence which the latter exerts upon the State and the municipal governments. Public opinion is also enlightened, and rendered more favorable to the establishment of a well-organized sanitary administration, and the enforcement of health laws and ordinances.

The Association meets this year at a very important juncture of sanitary affairs, and standing as our great National Congress of Public Hygiene, the results of its deliberations will be of wide import. It is the only organization which, by its national character, its age, its reputation for honest and useful work, and the high official and scientific positions of its members, can at once grasp the great municipal State, national, and international sanitary questions of the day, and formulate principles which must guide the action of legislatures. We look forward, therefore, to this meeting of the Association, with the expectation that, in addition to its interesting daily work, some questions of pressing importance which must occupy public attention during the coming year will be duly considered and suitable action taken thereon.

Perhaps the most important subject which can engage the attention of the Association will be our protection against an invasion of cholera during the next year. It is a fortunate circumstance for us that this Oriental plague, in its progress westward, has dallied so long beneath the sunny skies of Italy. It has thereby given us ample warning of its intended invasion, and enabled the Association to consider, in the most deliberate manner, the defensive measures which should be adopted. This is the first time in the history of cholera epidemic in this country, that there has been an organized body of sanitarians and health authorities prepared, not only to bring to the discussions of the questions of prevention the latest investigations of science and the experiences of sanitarians, but the large majority of them are themselves the official guardians of the public health of their respective communities, and the appointed agents to enforce preventive measures. The country may therefore reasonably expect that, before the Association closes its session, cholera-prevention in all its phases will be discussed by experts, definite lines of action will be determined upon, and such combinations of authorities be organized as will give concert of action in the enforcement of defensive measures throughout the length and breadth of the land.

A second subject demanding the attention of the Association is the condition of our system of quarantine. The simple truth is that our so-called quarantines are a disgrace to the country. They are little else than gigantic political schemes of plundering commerce and travel under the sanction of law. At home and abroad they are the laughing-stock of all advanced students of preventive medicine. Thus far in the history of the Association this great defect in our system of health organization has been allowed to exist without even a protest. Numerous papers have been presented to that body, discussing the general subject of quarantines, but they have led to no practical results. We believe the time is now opportune for the Association to take decisive measures toward reforming our system of coast defences against foreign pestilences, and the country will be disappointed if, in this emergency, the subject is again passed over in si lence.

Again, the relations of the general Government to the measures of preventing the introduction of foreign epidemics into this country, and their spread from one State to another, demands the most serious consideration of the Association.

Through the efforts of the Association a plan was perfected in 1879 of associating the general Government with State and local health authorities in well-devised and concerted methods of action to prevent the invasion and spread of epidemics. For three years that plan worked admirably and effectually, and the country was protected, as never before, from the most dreaded of exotic plagues. The system of co-operation then established, with so much prudence and wisdom, has finally been destroyed by the reckless ambition of men intent only on wielding that power which comes of expending the public funds. The National Board of Health, selected with so much care by the President and Senate, as the agent of the Government in its future sanitary work, has been superseded by an officer of the Treasury Department without law or appointment. The laws, so carefully drawn to guard against the encroachment of National upon State and Municipal authority, and secure the judicious and economical use of the public money, have been purposely allowed to lapse, that there might be no restrictions upon the self-constituted agent who usurped the office and functions of the Board of Health. To-day, therefore, the field of National sanitary legislation is a blank, and it is for the Association

to determine whether the interests of the public health will be best subserved by a well-organized Health Department at the capital, acting under the restrictions of suitable laws, or by an irresponsible bureau officer without sanitary knowledge or experience, and governed by no other law than his own.

Bearing upon the same subject is a question of far wider application, which the Association ought to consider. We refer to *international co-operation in the prevention of contagious and infectious diseases.* There can never be any radical measures adopted and enforced which will strike at the very source of the propagation and spread of epidemic diseases until the great commercial nations of the world combine in good faith, and each in its respective sphere of operations fulfil its whole duty, whatever that may be. And this co-operation can never be established without an International Conference to which these commercial powers shall send delegates. The National Board of Health succeeded in securing one International Conference, by act of Congress, and so popular was the project that twenty-eight nationalities sent delegates. The informal discussions in this body of the measures of international co-operation proved that another conference, the delegates to which were empowered to agree definitely upon propositions to be submitted to their respective Governments, could effect an international sanitary league, offensive and defensive, which would eventually suppress such pestilences as cholera.

The Public Health Association is capable of influencing Congress to take the initial step in calling another conference of commercial nations, and the result could scarcely fail to be an agreement upon the terms of a treaty which would bind these nations to the rigid enforcement of adequate regulations to prevent the transportation of infectious and contagious matters or diseases.

During the present session of the Association the State Boards of Health are to meet in conference. The tendency of this meeting will be to review the project of a separate Association of State Boards of Health. The result of such a step would prove eminently disastrous to public health reform in this country. The Public Health Association stands to-day the foremost of our great national bodies, and is the recognized embodiment of scientific and practical sanitary knowledge and experience in this country. During the twelve years of its existence it has published a series of annual volumes which are unsurpassed by any other Association for real merit. Its influence on public thought and opinion, and on legislation, both State and national, is powerful, and when concentrated on practical reforms, is decisive. Any such dismemberment of the Association as this movement of the State Boards of Health seems to contemplate would be a most inglorious suicide. Far better will it be for the future of sanitary reform and administration in the United States to enlarge the scope and plan of the original organization, so that, while there may be the greatest diversity of discussion, there shall be unity of action, and the voice that shall pronounce the judgment and conclusions of the assembled congress of health authorities shall continue to be that of the American Public Health Association.

THE FIFTH VOLUME OF THE INDEX CATALOGUE.[1]

The appearance of the fifth volume of the Index Catalogue of the Library of the Surgeon-General's office will be hailed with the greatest satisfaction by the writers and workers of the profession, as adding another volume to the admirably exhaustive series which have opened such wonderful treasures of information and reference. Under no other auspices and under no other management could such work be accomplished, than those which centre in the Surgeon-General's office under the direction of the talented librarian, Dr. John S. Billings. In fact in no other country has such a thing been attempted, and it is safe to say, backed by the testimony of those who ought to know, that in no other place has the foundation for such work been laid. The present volume embraces an equal scope with the others, is of equal size, and comprises, as might be anticipated, an almost fabulous amount of references within its limits, viz., from *Flaccus* to *Hearth.* In brief it includes 15,555 author-titles, 5,755 volumes, and 12,596 pamphlets, also 8,069 subject-titles of separate books and pamphlets, and 34,127 titles of articles in periodicals.

The utility of the series proves itself more and more with each volume, and correspondingly indicates the hearty professional endorsement of governmental patronage. The best that can be said is that the good work is likely to go on, and every scholar in the profession will wish it Godspeed.

THE NEW CIVIL SERVICE REGULATIONS AND THE MEDICAL PROFESSION.

An advertisement appears in the daily papers to the effect that "an open competitive examination, under the New York State Civil Service rules, will be held October 22d, at the New York Academy of Medicine, to fill vacancies in the regular medical staff of the Hudson River State Hospital for the Insane, at Poughkeepsie, N. Y." It is further stated, that the examination is open to all graduates of reputable medical colleges.

This announcement, already indicated in a previous issue of The Medical Record, is, we believe, the first application to medical positions of the New York Civil Service regulations, which went into effect last August.

The regulations that have been adopted by this city show the general scope of those for the whole State, and as a knowledge of them may prove of some value to physicians who intend to become connected with the public service we venture to give some of the details here.

The positions which are obtainable now only after competitive examination are those of physician, surgeon, chief of staff of hospital, medical officer, medical superintendent and assistant medical superintendent, inspector of vaccination, or sanitary inspector, and those positions in the Health Department requiring a medical education and experience.

The rules also require an examination of all applicants for the positions of principal matron, head of training-school for nurses, orderly, nurse, and hospital attendant. These positions are included mainly under "Schedule

[1] Index Catalogue of the Library of the Surgeon-General's Office, U. S. Army. Authors and Subjects. Vol. v., Flaccus–Hearth. Washington, 1884.

D," which includes all persons for whose duty special expert knowledge is required; and "Schedule E," which includes physicians, chemists, nurses, orderlies, and other hospital and asylum attendants.

Applicants for medical positions must address a letter to the Secretary of the Municipal Service Boards, New York city, stating their age, residence, nativity, etc.; they must furnish a certificate of good character, and must give evidence that they have been duly authorized to practise medicine and surgery. The examination takes place before one of the three Examining Boards appointed by the mayor, and composed of three citizens. The examination, besides requiring evidence of physical and moral qualifications, includes the following, with the relative weight given to each: medical knowledge, 50; experience, 20; efficiency and accuracy in work, 15; character for maintaining discipline, 15. Naturally, certain variations from this are made in accordance with the character of the position.

It is in the power of the Advisory Board to institute non-competitive examinations for positions in the Department of Charities and Correction.

In regulation 30 it is stated that competitors for "the superior positions in Schedule D" are not obliged to produce a diploma, but a certificate from some reputable institution of having studied two years, or a certificate from a professional man of having studied for three years will suffice.

This provision, as will be seen, furnishes a possible opening for politicians to get in their friends who have not been regularly qualified as physicians.

The Civil Service regulations, if carried out thoroughly, will no doubt assist to raise the character of the medical service. Yet it must be admitted that the character of this service was on the whole very good under the old system. Rumors of late, however, that politics has too much influence in the Health and Police Departments, lead us to look forward with pleasure to anything that promises to remedy these existing or impending evils.

RECOGNITION OF HARD PREPARATORY WORK.

One of the earliest observations which a young physician learns to make is that of the enormous disparity which exists in the education, skill, manners, and general character of physicians. A young man has graduated from a classical or scientific college, has spent three or four years at a leading medical school, has walked the hospitals, has perhaps subsequently taken special courses or studied in Europe. He then settles in practice and finds that he must meet as a brother, and must be estimated by the public in the same rank with a person who, without preliminary training, graduated at some provincial institution, after a course of study lasting practically about two years. He hears derisive comments on this brother's ignorance or on that colleague's offensive ways, he hears the profession ridiculed for its incapacity and various standard weaknesses, and has to take his share of the obloquy, although he can feel without vanity that he is working intelligently and with some success in his chosen art. There seems to him to be something wrong.

There are some evidences that the profession everywhere feels that these differences between doctors and doctors are very great, and that the ill-repute which should fall on the careless and half-educated, should not have to be shared so completely by those who have trained themselves thoroughly, and who are working with an honest ambition.

Some time ago it was proposed in France that a special class of physicians should be established, composed only of those who had shown some evidence of unusual capacity.

In England and this country there is a tendency to indicate, in giving the medical title, the college which bestowed it, provided that institution was one whose character deserved such special designation. Certainly the degree of M.D., in this country, has a very unequal signification, perhaps to a greater extent even than that of A.M.

The establishment and success of the American Academy of Medicine helps also, in a measure, to give credit to those who have taken more than the usual pains to prepare themselves for a learned calling.

We are inclined to favor these plans which aim to give recognition to hard preparatory work. It may be said that such ideas are not "democratic," and that the humble graduate of an obscure school may become a better physician than he who is trained by the most elaborate methods. While this may be true in some cases, certain exceptions do not invalidate the general principle laid down. Hard preliminary work deserves a little recognition other than the slow and uncertain recompense furnished by the public.

THE PATHOLOGY OF SERPENT-POISONING.

A truly scientific account of the lesions produced by snake-poison is so rarely met with that the contribution to this subject by Dr. Romiti, of Sienne, in the *Archives Italiennes de Biologie* (tom. v., fasc. i.), is of great interest.

The victim was a man forty years of age. Within a few moment after receiving the bite, from the *viper aspis*, he fell into a syncopal condition, the heart became extremely slow, and death took place by asphyxia in four hours after the injury. At the autopsy, twenty-three hours post mortem, the body was still in a state of cadaveric rigidity; but it was noticeable that the injured arm was less rigid than the other. The abdomen was enormously distended; and the pupils dilated. The cellular tissue around the wounded surface was infiltrated with a sanguinolent serous fluid, which also invaded the muscular tissue. The neighboring veins were filled with black fluid blood, though the wounds had not entered any vein. The superficial cerebral veins were filled with blood of the same nature, and the pons, cerebellum, and medulla were very much congested. The pulmonary vessels were full of blackish blood, as were those of the abdominal organs; and the intestines were enormously distended with gas. The spinal meninges were congested, and the vessels of the cord engorged.

The most interesting phenomena, however, were those found on histological examination of the blood. Two series of preparations were made of venous blood taken from the vessels of the injured arm. The first, of a single drop of the blood, without any reagent; the second, of blood treated by Bizzozero's method, that of mixing the

blood with a seventy-five per cent. solution of common salt, slightly coloring with methylene violet, and protecting with paraffine. Preparations were also made of blood taken from other parts of the body. The best results were obtained from the examination of unmixed blood, and simply colored with methylene violet. The red blood-globules were normal as to form, but were pale, and the coloring-matter was diffused in the plasma; they had, moreover, no tendency to form rolls, as in the normal condition. Here and there were groups of leucocytes, and in their midst a granular substance. Under a 1,500-power, it was seen that the granular masses were formed of piastrine (Bizzozero), or hæmatoblasts (Hayem). The red disks were rapidly dissociated on the addition of distilled water.

In examining blood which had been preserved the same results were obtained as with fresh blood. The blood which had been kept in vessels remained fluid, of a syrupy aspect, dense, and wine-colored. Three months after death it had the same characteristics, never emitting the peculiar odor of putrefaction, but only a strong empyreumatic odor, very like Liebig's meat extract.

The liver, spleen, and pancreas were examined histologically. The kidneys were in a state of commencing interstitial nephritis. In the liver, the capillaries near the interlobular vein were markedly engorged. The pancreas was extremely soft, and of a pale yellow color; there was complete fatty infiltration of the granular cells, which accounted for the macroscopic appearance of the organ, but this condition may have existed before the injury which caused death.

It is interesting to note here the experiments of Bufalini, in which he injected 30 c.c. of blood from the inferior vena cava of this man into the peritoneal cavity of a guinea-pig; it had no noxious effect whatever. This confirms the results obtained by Albertoni, from which he concluded that the active and poisonous substance of a serpent may be considered as a true poison, and its action may be compared to that of an alkaloid.

BATHS FOR THE POOR IN WINTER.

The communication by Dr. Tauszky in the present issue is one of much interest to all who may have at heart the improvement of the sanitary condition of the poorer classes. The proposition to provide bathing facilities at all times, for the great unwashed, is one which needs only to be mentioned to be commended. It is impossible to estimate the amount of sickness which may be prevented thereby, aside from the individual comfort which is sure to result to such as may be brought to enjoy this very necessary measure. We do not care at present to speak of the details of the plan; these are calculated to take care of themselves when once the soundness of the principles are fully appreciated by the authorities. It is pre-eminently a subject which deserves the attention of the civic authorities, and it is to be hoped that his Honor the Mayor and the Board of Aldermen will give some direct and practical turn to the suggestion. The medical profession can be counted as a unit in favor of it. In fact, we fail to see how any argument can be used against it, except the comparatively trivial one of the expenditure of a small amount of money with a little trouble in the necessary organization. It is, however, one thing to say what the poor should do, but another thing to help them in doing it. The end to be attained by keeping them clean justifies itself beyond argument, and, fortunately, the means are easy of adoption and comparatively inexpensive.

News of the Week.

American Gynecological Society.—By the omission of two words in the transmission of our telegraphic report, it was made to appear that the President's address was not delivered. It should have read, was postponed *until to-day* (Thursday) on account of sickness.

On Thursday morning Dr. Albert H. Smith, of Philadelphia, delivered the President's address, entitled, "The Present Aspect of the Puerperal Diseases," in which he reviewed the literature, the theoretical, and the clinical aspects of the subject, and then devoted considerable space to criticisms on the germ theory of the diseases as set forth by Pasteur.

Malarial Hæmaturia and Pernicious Intermittent Fever.—Dr. Thomas J. Moore, of Richmond, Va., desires us to make some slight changes in the report of his remarks on malarial fever before the Medical Society of Virginia, at its late session (see The Medical Record, September 20, 1884, p. 328). He did *not* say that he had frequently met with cases of malarial hæmaturia in North Carolina, where he had practised, but *in the practice of his brother practitioners in the northern part of Alabama.* He is made, in the report, to say that he uses quinine hypodermically in ordinary malarial fever, whereas he said that he was in the habit of using the salt in that manner in cases of *pernicious intermittent fever.*

The Examination to Fill the Position on the House Staff of the Presbyterian Hospital will be held at the Hospital on November 3d, at 2.30 P.M. For particulars address Rev. Thomas G. Wall, Superintendent.

Remedies for Cholera.—M. Vulpian has made a report to the Academie des Sciences upon two hundred and fifty remedies for cholera, which have been sent by persons desiring to obtain the Bréant prize of 100,000 francs. Some of the discoveries modestly ask that they may be sent to Marseilles in order to test their remedies.

The Washington International Medical Congress.—The Committee on Organization of this Congress has been constituted as follows: Drs. Austin Flint, of New York; I. Minis Hayes, of Philadelphia; Lewis A. Sayre, of New York; Christopher Johnston, of Baltimore; George J. Engelmann, of St. Louis; J. S. Brown, U. S. Navy, and J. S. Billings, U. S. Army.

Significant.—The *British Journal of Homœopathy*, one of the oldest journals of its class, will cease to be published after this year.

An Investigation by the New York State Board of Health.—The New York State Board of Health is said to be about to undertake a collective investigation upon the question as to when a patient convalescent from an infectious disease ceases to be capable of conveying the infection.

The Vermont State Medical Society holds its seventy-first annual meeting at Montpelier on October 15 and 16, 1884. The presiding officer is Dr. S. S. Clark, of St. Albans. Papers are to be read upon "Diphtheria," "Rupture of the Uterus," "Laceration of the Cervix," and other subjects. Dr. J. S. Richmond, of Woodstock, Vt., is Secretary.

Responsibility for Payment of a Consulting Physician.—A test case, says the *Canada Lancet*, was recently tried in Belleville, Ontario, to determine whether or not a patient is liable for the fees of a medical man who is called by a friend or relative. In this case the brother of the patient summoned the consulting physician, who assisted in the amputation of a finger. The patient refused to pay the consulting physician, on the ground that he had not engaged him, and told him to look to the attending physician for his fee. The judge who tried the case ordered a non-suit, holding that the patient was responsible only to the physician he engaged.

Mr. Lawson Tait, while at Hamilton, Ontario, opened the abdomen for supposed gall-stones and found carcinoma instead.

Infectious Disease may Render a Lease Void.—A decision was recently rendered in England by Mr. Justice Field in a case where a claim was made for rent for furnished apartments for the term of the lease, the lessor refusing to occupy the house because, after the lease was made and before the lessee vacated the apartments, a case of an infectious disease appeared in the rooms. The defendant claimed that the existence of a contagious disease in a house rendered it uninhabitable, and the justice rendered a decision favorable to the defendant.

The New York Neurological Society held its first regular meeting for the season, on October 6th. A paper on "Gastric Neurasthenia" was read by Dr. L. Weber, and one on "Pseudo-bulbar Paralysis" by Dr. W. Browning.

The Medical Section of the French Congress for the Advancement of Science.—Among papers of interest read before this section, was one by M. Chaumier on "The Epidemic and Contagious Nature of Acute Pneumonia." The author thought that pneumonia was a constitutional infectious endemic disease, sometimes, though rarely, propagated by direct contagion. It had a germ which could retain vitality more or less long in dwelling-houses. M. Chaumier thought it wrong to poison with drugs persons already poisoned with disease, and advocated the treatment of pneumonia by baths alone.

M. August Ollivier read a paper upon the "Pathogeny of Herpetic Angina," in which he sought to establish the view that it was a neurosis generally of the middle branch of the trigeminus.

M. Bessette urged the use of the thermo-cautery to the entire exclusion of the scalpel in the treatment of spontaneous gangrene.

The Cholera.—It is seventeen weeks since the cholera first appeared in France and over eleven weeks since it appeared in Italy. The deaths from the disease in France have averaged about 375 per week, while in Italy the average has been 1,000 a week. A Roman paper estimates the total number of deaths up to October 1st at 10,800. There is every indication that the force of the epidemic is now spent, in Italy as well as in France and Spain. The total number of deaths from cholera in Italy on October 7th was only 44, in France 8, in Spain 1. A correspondent of the *New York Times* writes that the mastery of the plague in Genoa is really the first fine medical feature of the whole siege. Immediately after the pest broke out with virulence in that city, a fortnight ago, the authorities had the water supply analyzed, and they discovered that of the three sources of supply, that of the Nicolai Company was awful. The municipal works' supply was pretty bad, and that of the Gerzenti Company was pure. Immense and costly efforts were promptly made to shut off the first two sources and to turn the latter water into all the pipes. An immediate improvement was noticed, and the mortality declined after eight days, instead of advancing for weeks, as has usually been the case. We learn by cable also that the commission sent to Marseilles has made an elaborate report of many experiments with microbes, all of which were failures, and that Dr. Klein has shown contempt for the microbe theory by swallowing a quantity of bacilli without harmful result. The Marseilles commission found it could mathematically trace a cholera patient's condition by an hourly examination of the blood, the healthy globules remaining stationary and the unhealthy ones flowing between columns formed by others and taking them gradually off until the column is ruptured. The commission affirms that cholera is not contagious, and it concludes that while we know better than our predecessors what the cholera is not, we do not know what it is.

The Académie de Médecine met September 9th. M. Morel read a paper upon the "Cause of the Normal Evening Rise of Temperature." This was due to three things: food, light, and exercise, of which food was the chief factor. Animals fed during the night had the normal rise of temperature in the morning. M. Dujardin-Beaumetz reported the results of his study of disinfectants. He had reached the conclusion that sulphurous acid is the most efficient and convenient germicide. To obviate the objection that it attacks metals he had recourse to sulphurous acid made from liquid sulphurous acid by the method of Raoul Pictet.

Medicine Takes Curious Freaks in some of the States beyond the Father of Waters. In Nebraska, for example, there is a State University with a Medical Department. Said Medical Department has been taken possession of by certain eclectics, who naturally have started a medical organ, the *Nebraska Medical Journal*. The State evidently supports the Department, for we are told that tuition is free and expenses light. We are pleased to observe also that this free Medical Department has joined the cause of higher education, and will hereafter require attendance upon three courses instead of two. Meanwhile the organ is publishing various discussions as to whether electricity is the cause of the heart's movements.

Mistakes in Words.—A Philadelphia contemporary publishes a newspaper clipping concerning the word "microbe." This word, it states, was coined by M. Charles Sédillot, of Strasbourg, in 1878. The truth is, however, that Professor Pacini used the word "microbio" in 1854, applying it to a micro-organism of cholera.

Valuable Articles Stolen from Physicians' Offices.—At the Tenth Police Precinct Station-house, Brooklyn, N. Y., there are several valuable articles recently stolen by an office-thief, whose operations were very extensive in New York. These articles consist of microscopes, instruments, umbrellas, clothing, etc., still unclaimed, and which evidently belong to New York physicians. The captain is anxious that they be identified and taken away. The station-house is at the corner of Flatbush and Sixth Avenues, Brooklyn.

Subscriptions Asked for a Statue to Dr. Joseph Guislain.—We publish with pleasure the following notice sent to us by Dr. Lewis D. Mason, of Brooklyn: "An effort is being made to secure subscriptions for the erection of a statue to Dr. Joseph Guislain. The members of the Society of Mental Medicine, of Belgium, are actively interested in promoting this object, and desire that all specialists in this department of medicine have an opportunity to subscribe, and that the statue represent the combined subscriptions of the specialists in mental diseases of the world, rather than of any given district. To this end, subscriptions have been received from England, France, Russia, Germany, Italy, Holland, and Sweden, in sums varying from five, to twenty-five francs. The United States, as yet, is *not* represented. We hope the subscriptions from America toward the erection of this statue will compare favorably with those of other countries. Subscriptions may be sent to Dr. B. C. Ingels, Médicin de l'Hospice-Guislain á Gaud, Belgium. List of acknowledgments will be sent to subscribers."

The Limits of Legitimate Advertising.—We commend to our readers' attention the following from the *Iowa Medical Monthly*. The limitations which are here suggested contrast strongly with the sordid and commercial view which allows the unlimited distribution of professional cards with the specialty obliquely indicated thereon. Says the *Monthly:* "Is there such a thing as legitimate advertising, that the physician may use without violating the spirit of the Code? We would answer unqualifiedly, yes, and that its dimensions begin with a good education, gentlemanly conduct, social qualities, industry, and end with the moral effect in the community of his good deeds, distributed by word of mouth, from his friends. This mode of advertising, together with that invaluable quality, tact or good judgment, will always bring success."

Objects and Membership of the American Academy of Medicine.—We have been requested by Dr. Richard J. Dunglison, Secretary, to announce the objects aimed at by the American Academy of Medicine, and also the qualifications necessary for membership. The Academy is growing yearly in members and influence, but it is desired that it embrace in its membership all the physicians in the country qualified therefor. The Constitution says that the objects of the Academy shall be: 1. To bring those who are Alumni of Classical, Scientific, and Medical Schools into closer relations with each other. 2. To encourage young men to pursue regular courses of study in classical and scientific institutions before entering upon the study of medicine. 3. To extend the bounds of medical science, to elevate the profession, to relieve human suffering, and to prevent disease. The Membership of the Academy shall consist of Fellows and Honorary Members. The Fellows shall be Alumni of respectable institutions of learning, having received therefrom: 1. The degree of Bachelor of Arts, or Master of Arts, after a systematic course of study, preparatory and collegiate. 2. The degree of Doctor of Medicine, after a regular course of study, not less than three years, under the direction and instruction of preceptors and professors. 3. When a candidate is an alumnus of a foreign institution not granting the degree of Bachelor of Arts or Master of Arts, a certificate or certificates, which shall be considered as equivalent by the Council and Academy, may be accepted in lieu thereof, provided he shall have subsequently received the degree of Doctor of Medicine. 4. The Fellows shall also have had an experience of three years in the Practice of Medicine, in one or more of its recognized departments, and shall have a good moral and professional character.

The French Association for the Advancement of Science.—This association, which now numbers four thousand members, held its annual meeting at Blois, beginning September 4th. It has a Medical Section which is, we believe, the nearest approach to a National Medical Society that France possesses. The meetings of this Section have not heretofore been productive of any very valuable work, and have not attracted many of the leading members of the profession. The last meeting at Blois, however, seems to have been rather more notable. It was presided over by M. Nicaise, and among those present were MM. Ollivier, Bouchard, and Verneuil.

The New York City Board of Health.—The *Sanitary Engineer* censures our city Board of Health on account of its inefficient action in cleaning out the "slums." The practice of dealing with these places by turning the wretched inhabitants temporarily into the streets and then "squirting copperas-water over the filth," is denounced as a weak and useless measure. The *Sanitary Engineer* believes that all these rookeries should be torn down, if we do not wish the cholera here.

The Nebraska State Medical Society and Preliminary Education.—We learn from *The Journal of the American Medical Association* that the Nebraska State Medical Society has made arrangements for securing a preliminary education to all persons intending to study medicine with physicians of the State. No member of the Society will accept a student of medicine unless he has given evidence of having a certain amount of preliminary education. This is a step that has already been taken by some smaller societies and we trust the example will continue to be imitated, and the practice honestly carried out. Dr. Davis says: "We have seen parties, who in medical society meetings and addresses would advocate the most rigid exaction of a fair standard of general education, take students into their own offices who had not even a respectable common or district school education, and then advise them to attend medical colleges where not only no standard of general education was required, but where a diploma could be obtained for an expenditure of the smallest amount of time and money."

THE INTERNATIONAL OTOLOGICAL CONGRESS.—The Third International Otological Congress was held at Basel, Switzerland, from the 1st to the 5th of September, under the presidency of Dr. A. Burckhardt-Merian, of Basel. We learn from *The British Medical Journal* that the proceedings were opened on Monday at the hall of the University, by addresses from Dr. Sapolini, of Milan, the retiring president, and Dr. Burckhardt-Merian, the president-elect. Addresses of welcome to the town of Basel were delivered by Counsellor Schenck, on the part of the Swiss Federation, and by a delegate from the Canton of Basel. A breakfast, given by the Swiss surgeons to the members of the Congress, followed. On Wednesday the members of the Congress were entertained at a banquet. During the three following days about forty papers were read, and demonstrations were given on subjects bearing on otological science, all of a most interesting, instructive, and original nature. The principal contributors were Politzer, of Vienna; Moos, of Heidelberg; Guye, of Amsterdam; Sapolini, of Milan; Gelle, of Paris; His, of Leipzig; Hartmann, of Vienna; Löwenberg, of Paris; Kuhn, of Strasburg; Albrecht and Delstanche, of Brussels; and Pritchard, of London. It has been arranged that the next Otological Congress be held in Brussels in 1888; and an organizing committee has been nominated, Dr. Urban Pritchard representing England.

DR. THADDEUS JOHNSON has resigned the Chair of Surgery in the Southern Medical College, on account of his health. He is succeeded by Dr. J. McF. Gaston, formerly of Columbia, S. C.

Reviews and Notices.

A TEXT-BOOK OF PRACTICAL MEDICINE: Designed for the Use of Students and Practitioners of Medicine. By ALFRED L. LOOMIS, M.D., LL.D., Professor of Pathology and Practical Medicine in the Medical Department of the University of the City of New York, Visiting Physician to Bellevue Hospital, etc. With two hundred and eleven illustrations. 8vo, pp. 1,102. New York: William Wood & Co. 1884.

THE popularity of Professor Loomis as a medical teacher will of itself do a great deal toward making this book a success. But it need not rely on this. Independent of the author's reputation the volume can speak for itself, as a comprehensive and practical treatise on general medicine. The first thing which impresses the reader is the systematic arrangement of the various diseases discussed. In so far, the author stamps his work with the results of his experience as a clinician. His aim apparently is to draw the outline of general principles with a rigidity and distinctness which admits of no question. This is, however, rather a virtue than a fault, considering the aim of the book. It brings out the strong individuality of the author. It is a positive book from beginning to end, bringing out the strong views of a practical man. The style is terse and perspicuous, the descriptions of diseases and the indications for treatment are direct, practical, and force upon the reader the conviction that the author not only understands his subject in all its bearings, but has the faculty of taking others with him.

While it may be difficult to conceive the possibility of originality in a work like this, there is enough of such an element about it, in arrangement and general treatment, to make it different from any of its kind, and proportionately valuable. Dr. Loomis is particularly happy in making clear the indications for treatment of the different diseases as based upon pathological conditions. He is seen at his best in his discussion of fevers and chest and kidney diseases. It is safe to say that the chapters on these subjects have no equal for practical worth in any language. His divisions are natural, scientifically systematic, and thoroughly practical, really leaving nothing to be desired on the part of the learner who wishes for a broad and solid foundation, upon which he can base his facts of past and future experiences. The difficult subject of auscultation is made strikingly simple not only by word description, but by means of diagrammatic representations. The latter are of the greatest value to the student in making out the relation of the auscultatory signs to the different pathological changes in the lungs and heart. It is difficult to conceive how they could be indicated more satisfactorily.

The chapters on fevers are, as already intimated, of great value. Typhoid fever receives the attention which its great frequency of occurrence demands. There is scarcely any acute disease the treatment of which gives the practitioner more anxiety than this. There are so many circumstances to be taken into account, and so many conditions to be fulfilled, that he cannot study them too thoroughly, or cannot be too well prepared for emergencies. Professor Loomis treats this disease as he does all others, from a clinical standpoint, and the rules which he lays down are eminently safe, and will commend themselves accordingly to the good sense and experience of every one who has seen much practice in that line. These remarks will be found to apply specially to reduction of temperature by cold baths and by quinine. The latter in large doses is a favorite with the author, and his reasons for the practice are very intelligibly given.

The division of fevers is the same as that adopted by most authors, with the exception that the typho-malarial type is treated under the head of continued malarial fever. The author believes that the latter is caused by the combined influence of a malarial and a septic element. His treatment, however, does not differ essentially from that advocated by observers who first studied the disease during the late war. We are inclined to believe that the new name is a good one, and will be generally adopted as best expressing the general features of the disease.

Bright's diseases are treated of under three leading heads: First, the form in which the morbid changes commence in the uriniferous tubules, designated parenchymatous nephritis; second, the form in which the change commences in the intertubular tissue, the cirrhotic kidney; and third, the variety in which the blood-vessels are first diseased, viz., the amyloid kidney. This division is simple and founded on advanced pathology. While speaking of this disease we wish to refer to the admirable rules laid down for treatment, and congratulate the author on the masterly manner in which he has simplified the whole subject.

The figures showing microscopical changes of organs are admirably drawn, and were specially prepared for the work by Dr. M. N. Miller, of the University Laboratory. Of these there is a large number, giving all the leading pathological changes in the tissues of the different internal organs.

In summing up our conclusions in regard to the book as a whole, we repeat that it is the best of its kind and is destined to be the most popular work on practical medicine yet published. It is a matter for great congratulation that by means of his admirable book the distinguished author can now reach thousands who, unfortunately for them, have not had the opportunity of enjoying his teaching in the class-room or hospital ward, and learning those methods of diagnosis and treatment which have tended to make him a successful practitioner in every sense of the term.

Reports of Societies.

PRACTITIONERS' SOCIETY OF NEW YORK.

Stated Meeting, October 3, 1884.

DR. A. BRAYTON BALL, PRESIDENT, IN THE CHAIR.

DR. JAMES B. HUNTER read a paper (see page 397) entitled

SOME POINTS IN THE THERAPEUTIC APPLICATION OF HEAT AND COLD.

DR. GEORGE F. SHRADY was ready to endorse Dr. Hunter in his remarks on the relative value of hot and cold applications in the treatment of surgical cases. There was no question in his mind as to the value of the cold coil, as recommended by the author of the paper, in the treatment of traumatic peritonitis. In such cases cold was used as a preventive or arrester of a formidable and rapidly spreading inflammation. In general, however, in the treatment of surgical injuries, when an attempt was made to fulfil these indications, there was often a failure, for the reason that the cases were not seen sufficiently early. This was certainly so in hospital practice. And from other contra-indications these applications were frequently painful to the patients, especially those who were suffering from synovitis and sprains. Consequently he was getting into the habit of using hot applications in preference, particularly for joint sprains, accompanying such treatment with rest and following it with a firmly supporting bandage. In many cases of recent sprain he used nothing but the bandage and rest. When inflammation was fairly under way and incapable of arrest, hot applications were indicated; even in traumatic peritonitis, especially if these were combined with the internal administration of opium in full doses.

In regard to the application of cloths soaked in hot water to oozing wounds there could be no doubt of its value, nor of that of the injection of hot water into stumps in a like condition. Rubber bags filled with hot water formed a very useful means of making hot applications to limited inflammatory troubles.

DR. SAMUEL SEXTON said that the paper called to his mind an early experience in the use of hot water, which had started him to using it a great deal. In 1870 he met a gentleman in the wash-room of the Union League who was unsuccessfully trying to stop a severe nose-bleed by the use of cold water. Dr. Sexton recommended him to snuff hot water up the nose. This was done and the attack stopped almost instantly. Since then the speaker had used hot water as a hæmostatic in all cases, after removing polypi; also as a gargle after tonsillotomy.

With regard to the use of cold, in the early years of his practice he had used freezing applications in the amputation of fingers, as a local anæsthetic. They had prevented suffering and acted very well.

DR. A. A. SMITH had used both rubber and

LEAD COILS IN PYREXIA.

In some cases of typhoid fever, with a temperature of 105° to 105½ F., a single application of the lead coil had reduced the temperature to below 100° F. The coil used had been considerably smaller than those shown by Dr. Hunter. It would not only reduce the temperature but keep it down. In one case of typhoid fever the coil had been kept on continuously for nine days, the temperature being kept below 100°.

Dr. Smith had noticed that the pulse was not always reduced in rapidity correspondingly with the temperature, and he thought that, as a rule, when the temperature is reduced rapidly the pulse is reduced in a much less degree.

He had been for a long time a very strong believer in the reduction of temperature by cold as a therapeutic measure in the pyrexiæ; but he also believed that it was capable of doing much harm. He did not believe in the heroic application of cold in typhoid fever after the tenth or fourteenth day, or when there was a tendency to heart failure, for it might then cause nervous shock. He believed that the applications of cold acted in much the same way as the various antipyretics, referring especially to

KAIRIN AND ANTIPYRIN.

These will reduce temperature, but they also reduce the force of the pulse. The new agent, antipyrin, reduces temperature very powerfully, but it weakens the heart also. The speaker doubted if Americans had the constitutions which would stand the powerful antipyretic measures to which the more stolid Germans are subjected. He felt, therefore, that the safest means of applying cold was the

KIBBEE'S COT.

He had been much pleased, however, with the action of the coils, and they seemed to furnish a safe way of applying cold. The speaker recalled the introduction of cold applications in fever at Bellevue Hospital, in 1870–71. The impression received then was that the application of cold locally in the form of ice-bags, in pneumonia, seemed to increase the tendency to involve new lung tissue.

DR. KINNICUTT had found that the most satisfactory way of applying cold in typhoid fever was by means of the Kibbee cot. He had given it a very thorough trial in St. Luke's Hospital. He had succeeded in obtaining all the good results of the full-length bath without the discomfort to the patient of the latter and the increased labor entailed upon the attendants. A large receptacle for the water was placed upon a stand above the patient's head; a rubber tube was attached, ending in a numerously perforated nozzle. The patient, uncovered or covered simply with a sheet, was then continuously sprinkled from head to foot, for a time corresponding to that usually employed in giving the full-length bath.

Dr. Kinnicutt's experience differed from Dr. Smith's in that, as a rule, he had found, by either the full-length bath or by the application of cold by means of Kibbee's cot, with a reduction of temperature there had been a corresponding reduction in the frequency of the heart's action. Was it not possible that the coil acted in a somewhat different way in lowering temperature from cold water bathing?

DR. A. BRAYTON BALL said, that when he went upon his service at Bellevue Hospital, he had been told that the cold coils had been tried in typhoid fever, and that they had failed. He, therefore, had not tried to use them.

DR. FORDYCE BARKER said that he had been studying clinically the subject of the antipyretic use of cold ever since Dr. Wilson Fox's paper appeared on the "Use of Heat and Cold in Hyperpyrexia." By hyperpyrexia he meant a condition in which the temperature rose to 107° or 112° F. This was an essential fever and a rare one. He had seen but very few cases.

He had thought that in the use of cold as an antipyretic one point had been overlooked in practice, and that was the looking at the pyrexia as the essential disease, instead of regarding it as one of the, perhaps, incidental symptoms, which might or might not demand treatment.

Two or three years ago there began to be a great deal of interest in regard to the use of cold in arresting or preventing and even curing peritonitis. That treatment was most enthusiastically advocated by several surgeons, notably by Dr. Thomas. The speaker, however, was obliged to say that he had reached conclusions in some respects quite different from what he had expected.

He was not certain but that there was a very essential difference between surgical peritonitis and idiopathic, or what he would call, for want of a better term,

OBSTETRICAL PERITONITIS.

He saw quite a number of these cases treated by cold applications. He had studied them with a perfectly im-

partial mind, and he had been disappointed in the results. In many cases he found no such results as Dr. Thomas and others had claimed. There were two cases in particular, which he had in mind, where the coil had been used most thoroughly. At first its influence had been to reduce the temperature and pulse, but after a time the temperature ran up to 104° or 105° F., and the pulse became quick, while associated with it was a very bad general condition. He had found symptoms of general depression and impending pneumonia or bronchitis. The whole abdomen was pale, the capillary circulation almost arrested, with doubtless, in consequence, a hyperæmia of the deeper-seated organs. After removing the coil and the administration of stimulants, and application of turpentine to the abdomen, the most marked improvement occurred. The temperature fell, and the pulse became slower and stronger.

These experiences surprised him, because he had previously seen a remarkable result from cold, and one which led him to expect a great deal from its use.

Two years ago, on one of the worst nights of the winter, he was summoned to see a lady who had been taken suddenly very ill. She had been to the opera that evening, and after it was over had been obliged to stand in the doorway, exposed to the air, while waiting for her carriage. She was menstruating at the time. The menses stopped, and when she got home she was seized with a most violent and prolonged chill. This was followed by intense pain throughout the abdomen. Ginger tea was given, and hot applications made, but the pain went on increasing until, when the speaker arrived, she was nearly frantic. The patient was of a self-possessed and calm temperament, but suffering such agony that she could hardly bear a sheet upon her. The abdomen was puffed up and very sensitive. Dr. Barker gave a hypodermic of fifteen minims of Magendie's solution. After waiting half an hour, there being no abatement in the pain, he sent for an ether-spray apparatus, and at the same time gave her another hypodermic injection of fifteen minims. He thought that there was an incipient peritonitis, and that the cold might act favorably upon that as well as have a direct anæsthetic action. The patient meanwhile had commenced vomiting. He then

SPRAYED THE WHOLE ABDOMINAL SURFACE

until it was very cold, as if it had been covered with ice. The relief was remarkable; the pain disappeared, the hand could be pressed firmly upon the abdomen without causing pain, and the patient went to sleep. The pulse became quite natural also.

Next day the menstruation came on again, and the patient seemed very well. Dr. Barker thought that he had very possibly aborted an attack of peritonitis by the use of the cold.

This case had naturally prepared him to expect much from the treatment of obstetrical peritonitis by cold. But the question was whether, as he had said, the conditions were the same here as in surgical peritonitis. In puerperal peritonitis we have a natural and necessary wasting of tissue. This is not the fact in traumatic peritonitis. The prolonged application of cold has a paralyzing and depressing effect. It reduces temperature, but does it relieve the disease?

The speaker thought that the use of cold in puerperal peritonitis was a measure of doubtful utility, especially its prolonged use. In incipient cases it is extremely useful, but in advanced cases it has a merely temporary effect.

Dr. Barker was led by a recent experience to speak of another point, viz.:

THE SAFETY OF HOT INJECTIONS IN ABORTION.

A lady who had been confined last spring, had made a good recovery, and had spent the summer at a watering-place, came to the city a few days before in order to make some purchases for a new house which her husband, a wealthy man, was building. She had only menstruated once since her confinement, and was at the present time eight weeks advanced in her second pregnancy. She had finished her work and was expecting to start on the next morning for Chicago. In the night (October 2d) she was taken with flooding and pain. Dr. Katzenbach was called in to see her. There was not much hemorrhage, but the pains were severe. An examination showed that there was no protrusion of membranes. Toward morning, therefore, Dr. Katzenbach began to use vaginal injections of not very hot water. He used a Davidson syringe with a nozzle having only lateral openings. While giving the second injection, the patient suddenly went into a state of collapse and appeared as if she were going to die at once. Stimulants were given, and Dr. Barker was summoned. They had been fighting all day to keep her alive. Toward night she had become better and seemed to be reacting from the collapse.

The patient was of a fine, sensitive temperament; and the speaker believed that she had suffered from nervous shock. There was no evidence at all that air had passed into the uterus or Fallopian tubes, and the warm injections had been given very carefully. During the day the membranes and fœtus came away and there was no more hemorrhage, nor had she lost enough blood to account for her collapse.

Dr. Barker had never had an experience like this before. In response to a question he said that he did not think that this case showed that it was dangerous to use hot vaginal injections in abortion. He admitted that the relation between the injections and the shock might have been one of coincidence.

Dr. William M. Polk said that there were three points in the therapeutic use of heat and cold of especial interest, viz., the use of cold in high temperatures, the use of heat in post-partum hemorrhage, and the use of heat as a vaginal application in cases of pelvic inflammation.

With regard to the use of

COLD IN HYPERPYREXIA,

it was capable of doing a great deal of harm. In other words, the mere fact of a high temperature does not itself indicate the use of cold. Several years ago, while visiting the general medical service at Bellevue Hospital, he had used cold applications a great deal. Upon the class of cases which we come in contact with in the hospital it did not act very well. It reduced the temperature, but at the expense of the vitality of the patient. He had found, too, that it was a matter of great importance to look into the condition of the kidneys, because in cases where there is much degeneration, cold is liable to act badly. Such a contingency is to be looked for in typhoid fever and post-partum peritonitis more than after ovariotomy.

As to

POST-PARTUM HEMORRHAGE,

he was much more disposed to rely upon the use of heat than of cold in its treatment. It had seemed to him that when he had used cold there had been such an amount of after-depression as to add very much to the danger of the patient. He had found hot-water injections quite as efficacious in checking post-partum hemorrhage as cold.

As to the use of hot injections in pelvic inflammations, he had found them very valuable. The inflammatory exudation differs, however, in its absorbability in different persons. There is a class of cases belonging to what we used to call the strumous diathesis, and with these the exudations about the uterus are very slow in being absorbed, while the long-continued use of hot water seems to retard rather than help.

Dr. Hunter said that he entirely agreed with Dr. Barker in his opinion as to the use of cold after confinement. He did not think that the cold coil was so good in obstetrical as in surgical peritonitis.

With regard to the fall of the temperature and not of the pulse, Dr. Hunter said that while this might accompany attempts to reduce fever rapidly, he had generally advised a slow reduction.

Dr. Polk referred to a case of scarlet fever where the

HIGH TEMPERATURE WAS REDUCED BY HOT APPLICATIONS.

It was that of a boy who had been showing most unfavorable symptoms. His temperature ran up to 106°, and there seemed little hope of effecting any relief. Dr. Metcalfe advised that cloths be wrung out in hot mustard and water and placed about the patient. In half an hour the temperature began to fall and favorable symptoms set in. It was the only measure that seemed to do any good whatever.

Dr. Smith referred to a case in his own experience almost identical, where a child suffering from scarlet fever received no benefit from cold applications. Hot cloths wrung out in mustard-water produced a fall in the temperature and the development of favorable symptoms.

Dr. C. L. Dana asked if there were yet any trustworthy statistics from American practice showing the efficacy of

COLD APPLICATIONS IN TYPHOID FEVER.

Since the beginning of his practice he had been greatly interested in this subject, having, while an *interne* at Bellevue Hospital, seen it extensively tried, and with doubtful results. Shortly after leaving Bellevue he had collected statistics of the cold-water treatment of typhoid fever in that hospital, and they had not made a favorable showing. The statistics quoted from Dr. Peabody by Dr. Hunter, as to the results of cold applications in typhoid, were of hospital cases and contained many sources of error. The statistics compiled by Brand had in particular been shown to be most fallacious. The speaker said that the result of the long debates on typhoid fever at the Académie de Médecine of Paris had been unfavorable to the use of cold applications. In England, too, the sentiment and evidence against it were very strong. In Germany, recently, an opposition to the once popular use of cold was apparently developing. The speaker only contended that experience had not yet justified the routine use of antipyretics.

Dr. Kinnicutt thought that the statistics of the cold-water treatment of typhoid fever in this country were not sufficiently large to judge from them of its efficacy. In Germany the belief in its efficiency was still fully maintained, he thought. A careful study of the last debate on this subject by London hospital physicians and the statistics furnished by them, led to different conclusions, it seemed to him, from those obtained by Dr. Dana. In France, the opinion of at least the Lyons physicians, was all in favor of the cold-water treatment.

Wound of Abdomen—Protrusion of Intestine—Rapid Recovery without Peritonitis.—The following case, reported to us by Dr. E. B. Ward, of Greensborough, Ala., illustrates the immunity against inflammation which the peritoneum sometimes shows. In a "rough and tumble" fight a man received a wound in the left inguinal region just above Poupart's ligament. After receiving the wound he mounted a horse, rode one mile, put up his horse, and then walked another mile to a friend's house. "When I saw him," writes Dr. Ward, "he was very much exhausted. I found the outer opening about two inches in length, and the inner, penetrating the abdominal walls to the cavity, about one inch. Several folds of intestine with omentum protruded, and they were only returned after anæsthetizing the patient. I first closed the inner opening with interrupted sutures, including the *peritoneum* in the sutures. I then closed the outer integumental wound in the same way, dressing the wound with carbolized dressing, and awaited the result. The patient progressed splendidly without a rise of temperature above 100°, and in less than a week from the date of injury he was up and about his work."

THE NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 2, 1884.

Fordyce Barker, M.D., LL.D., President, in the Chair.

Dr. F. H. Bosworth read a paper (see page 365) on

THE THREE TONSILS—SOME PRACTICAL SUGGESTIONS IN REGARD TO THEIR STRUCTURE, FUNCTION, AND DISEASES.

The President called upon several gentlemen, not specialists in diseases of the throat, to discuss the paper, because of their experience with certain points contained in it. He first said, with regard to his use of the bicarbonate of soda in quinsy, mentioned by the author, that he had been in the habit of seeing a few cases of this disease each year, and until some years ago they almost invariably ended in suppuration; but since he had begun the local application of bicarbonate of soda in not a few of the cases the disease was aborted. A marked instance of the kind occurred in a patient seen with Dr. Bosworth, a gentleman of eminence in literature, who was suffering greatly from threatening abscess. The next morning after the use of the remedy he was found at the breakfast-table.

Dr. Douglas would agree with the author on most points, but there were a few to which he must take exception. He would agree with him, for example, that quinsy was a manifestation of rheumatism, or, especially, of gout, and the treatment which he had employed for this affection was largely that used by the President, namely, bicarbonate of soda. At the same time he gave the ordinary remedies against gout. He had found the gargle and spray of bicarbonate of soda also useful in cases of enlarged tonsil, but one of the most beneficial remedies for this class of cases was a powder composed of one part of menthol to a hundred parts of sugar of milk. He would not always resort to the knife for the removal of the enlarged tonsil; it could be slowly, but surely reduced in size by the persistent use of a powder composed of salt, camphor, ammonia, and sugar of milk.

Dr. F. H. Hamilton was inclined to agree with Dr. Bosworth that the enlarged tonsil should be removed by the knife; yet he had often observed that the enlarged tonsil of childhood disappeared before the twentieth year. He supposed the author, when he said there was no danger connected with the operation, meant not in the acute or engorged stage, and not in those of the hemorrhagic diathesis. The question had been raised whether all or only a part of the tonsil should be removed: he should say all that the knife would include.

Dr. Jacobi believed that the only efficient treatment for the enlarged tonsil was removal; applications would not reduce its size, and where they had apparently done so the reduction was due to some other cause. The enlarged tonsil might remain stationary and appear smaller after the lapse of years, because of the growth of the fauces. As to the danger of hemorrhage, there usually was but little loss of blood, but it might be profuse from cutting into the soft palate—an accident which could not always be avoided. The most efficient means for stopping hemorrhage when it occurred was digital compression, applied, perhaps, for an hour or more. He could not agree with the author's view that follicular tonsillitis was an essential fever; he looked upon it as a local disease. What Dr. Bosworth took to be an essential fever was probably diphtheria, for cases of diphtheria were often overlooked or mistaken for some other affection. It was a great mistake to suppose that every patient sick with diphtheria must necessarily die; there were many mild cases which went unrecognized, and which were all the more dangerous for that reason, as they were the more likely to spread the disease. Dr. Jacobi laid particular stress upon this point because of its importance to the public health.

Dr. Weber had not yet seen a case which went to

substantiate the view that a phlegmonous inflammation around the tonsils was due to the gouty habit. He had found it most frequently in patients of poor general health.

The President remarked that guaiacum had once been strongly recommended in the treatment of quinsy, on account of the supposed gouty origin of the affection; but he had not obtained the results with it which he had been led to anticipate from reading certain articles in the medical journals.

Dr. Post thought the best treatment for the enlarged tonsil was extirpation.

Dr. Hamilton had found the external application of ice or snow the best means for checking hemorrhage after removal of the tonsil.

Dr. Fruitnight had aborted some cases of quinsy by the administration of the tincture of aconite.

Dr. Jarvis again called attention to a distinction which he had made between the soft and hard, or indurated enlarged tonsil, the latter being found in the syphilitic. If the scirrhous tonsil were cut it would surely give rise to hemorrhage, and might result fatally. He employed the knife in the removal of the soft enlarged tonsil, and the cautery or snare in the removal of the indurated tonsil. He did not think any more of the tonsil should be removed than was necessary, for it doubtless served some physiological purpose, as the lubricating of the fauces and protecting the carotid artery.

Dr. Brandeis said he believed in the Darwinian theory of the survival of the fittest: the tonsils had survived some thousand years, had fulfilled some physiological purpose, and he doubted not that they performed their function well, whatever it might be. But the tonsils, like other structures, were liable to disease, and diseased tonsils might be worse than no tonsils at all, and therefore he believed they should in proper cases be extirpated. He then pointed out the advantages of the tonsillitome over the knife in certain cases. Contrary to the experience of Dr. Bosworth, he had found hemorrhage in young subjects rather than in the adult, although not extreme. To prevent hemorrhage, he allowed the patient to sip a solution of tannic acid, and if necessary, he applied pressure. Dr. Bosworth's description of quinsy corresponded with that in Ziemssen's "Encyclopædia," there called peritonsillitis, but Dr. Brandeis could not accept the view that it was always an inflammation of the peritonsular sheath. He recommended aconite and the ammoniated tincture of guaiacum in its treatment until an abscess should have formed.

Dr. Corning had arrested a severe hemorrhage after tonsillotomy in one case by the use of his carotid compressor.

Dr. Bosworth, in closing the discussion, said, with regard to the possibility of reducing the size of the tonsils by astringents, that he believed it could not be done. Their size, however, might be reduced in the young, in whom they were in a state of chronic inflammation, by the new tissue undergoing contracture. This would account for the diminished size of the tonsils on reaching adult life. As to hemorrhage in the young, it was only an oozing; considerable hemorrhage only occurred in the adult. That tonsillotomy was not dangerous was apparent from the fact that in all medical literature not a single fatal case was recorded. The cases in which the carotid artery had been wounded were excepted; this accident could never occur in the hands of a surgeon. In arresting hemorrhage with the actual cautery, the iron should be applied from above downward, that it might not be cooled by the flow of blood before coming in contact with the bleeding vessel. He regarded peritonsillitis a very good name for quinsy, but he did not believe there was a peritonsular capsule proper. As to the tonsils performing their function, he did not think they existed in the normal state, but that they were the result of disease.

The Academy then adjourned.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE CHOLERA—DR. LEWIS ON THE COMMA-BACILLUS AND ITS NON-SPECIFICITY—CANNIBALISM AMONG AN ENGLISH SHIPWRECKED CREW—HOSPITAL SATURDAY—THE HEALTH EXHIBITION AND THE HOSPITALS—DEATH OF MR. NETTEN RADCLIFFE.

London, September 20, 1884.

Despite the prophets of evil, the dreaded cholera has not yet visited us. All possible precautions have been taken to prevent the introduction of a case into the kingdom. Steps have been taken to prevent cargoes of rags from Marseilles and other places from being landed at British ports in cases where there is any possibility of their bringing infection.

With regard to the pathology of cholera, an interesting memorandum has just been issued on the subject by Dr. T. R. Lewis, Assistant Professor of Pathology at the Army Medical School, Netley. Dr. Lewis has lately visited Marseilles for the purpose of studying the subject practically. He criticises Koch's published reports rather closely, but the most startling point in his paper is the statement that comma-shaped bacilli have been found by him frequently in the salivary secretions from the mouths of healthy persons. This is evidently a very important observation, and should it be confirmed by further investigations, will go far to wholly discredit Koch's views on the bacillar origin of cholera. Dr. Lewis is a skilled microscopist and a laborious and patient worker in the field of pathology. Dr. Lewis has also studied cholera practically in India, where he served many years as an army surgeon. His former studies on the *filaria sanguinis hominis* did much to elucidate the pathology of those organisms, and are probably known to many of your readers.

While the story of the Greely Arctic expedition is still fresh in our memories, another horrible tale of cannibalism has just come to light. Three men and a boy going from England to Australia in charge of a yacht, were shipwrecked and drifted about in an open boat for nearly four weeks. As a last resort they killed the boy, and after drinking his blood ate his flesh. His heart and liver were devoured while still warm. It is right to state that the boy was apparently dying. They continued to eat his flesh for several days, when they were picked up by a passing vessel. There is no doubt whatever as to the facts, as the men confess what they have done, and have been arraigned for murder. None of the injurious effects alleged to occur from cannibalism appear to have followed in this case, as, despite their prolonged sufferings, the men seem now to have recovered a large measure of health. Much sympathy is expressed for them in their present position.

Hospital Saturday has realized more than was at first thought, and the total will be more than last year. The workshop contribution is still very small.

The council of the Health Exhibition have handed £4,000 to the Lord Mayor for distribution among the London hospitals.

Mr. Netten Radcliffe has just died after a long illness. He was well known as a sanitary worker, and was for some time assistant medical officer to the local government board.

Menthol Pencils.—These pencils or cones, whose therapeutic value is very limited at best, have become so popular that great adulterations or substitutions are now practised. The ordinary oil of peppermint is probably substituted for the menthol, in large part at least.

THE OPHTHALMOLOGICAL CONGRESS IN HEIDELBERG.

(From our Special Correspondent.)

MURIATE OF COCAINE AS A LOCAL ANÆSTHETIC TO THE CORNEA—NO RADIATING MUSCULAR FIBRES IN THE IRIS—ACTUAL CAUTERY IN SUPERFICIAL CORNEAL ULCERATIONS—OPTICO-CILIARY NEURECTOMY—IS CATARACT THE RESULT OF CHRONIC BRIGHT'S DISEASE?—PROFESSOR ARLT AND HIS RECENT WORK IN GLAUCOMA.

KREUZNACH, GERMANY, September 19, 1884.

SIR: The usual Ophthalmological Congress in Heidelberg has just closed its session, and a few cursory notes at this early date may interest some readers. At this meeting elaborate papers are not read, but condensed statements are presented of the subjects introduced. The notable feature of this Society is that only new things or new phases of old topics are presented. This is not from any expressed rule, but is from the tacit understanding which controls men who are so diligently investigating the unknown in science as are these eager workers. These men have no patience with mere reiterations. Perhaps the most notable thing which was presented was the exhibition to the Congress upon one of the patients of the Heidelberg Eye Clinic, of the extraordinary anæsthetic power which a two per cent. solution of muriate of cocaine has upon the cornea and conjunctiva when it is dropped into the eye. Two drops of the solution were dropped into the eye of the patient at the first experiment, and after an interval of ten minutes it was evident that the sensitiveness of the surface was below the normal, then two drops more were instilled and after waiting ten minutes longer there was entire absence of sensibility, a probe was pressed upon the cornea until its surface was indented, it was rubbed lightly over the surface of the cornea, it was rubbed over the surface of the conjunctiva bulbi, and of the conjunctiva palpebrarum; a speculum was introduced to separate the lids and they were stretched apart to the uttermost; the conjunctiva bulbi was seized by fixation forceps and the globe moved in various directions. In all this handling the patient declared that he felt no unpleasant sensation, except that the speculum stretched the lids so widely asunder as to give a little discomfort at the outer canthus. Before the experiment his eye was shown to possess the normal sensitiveness, and the other eye, which was not experimented on, was in this respect perfectly normal. The solution caused no irritation of any kind, nor did it at all influence the pupil. The anæsthetic influence seemed to be complete on the surface of the eye, and it lasted for about fifteen minutes and the parts then resumed their usual condition. This first experiment was done in the presence of Professor Arlt, of Professor Becker, of the clinical staff, of Dr. Ferrer of San Francisco, of some other physicians, and of the writer. The next day the same experiment was performed on the same patient in the presence of the Congress and with the same results. This application of the muriate of cocaine is a discovery by a very young physician, or he is perhaps not yet a physician, but is pursuing his studies in Vienna, where he also lives. His name is Dr. Koller, and he gave to Dr. Brettauer, of Trieste, a vial of the solution, to be used in the presence of the Congress by Dr. Brettauer. Dr. Koller had but very recently become aware of this notable effect of cocaine, and had made but very few trials with it. These he had been led to make from his knowledge of the entirely similar effect which it has for some year or more been shown to have over the sensibility of the vocal cords, and because of which laryngologists pencil it upon their surface to facilitate examinations.

The future which this discovery opens up in ophthalmic surgery and in ophthalmic medication is obvious. The momentous value of the discovery seems likely to prove to be in eye practice of more significance than has been the discovery of anæsthesia by chloroform and ether in general surgery and medicine, because it will have therapeutic uses as well as surgical uses. It remains, however, to investigate all the characteristics of this substance, and we may yet find that there is a shadow side as well as a brilliant side in the discovery. Professor Kühne, who in the Heidelberg Physiological Laboratory worked out the details of Boll's discovery of the visual purple of the retina, received the news of this new discovery with the liveliest interest. We may, perhaps, get from him a further investigation into its properties. The substance makes a clear solution, and is found in Merck's catalogue.

Another notable statement came from Dr. Eversburch, of Munich, as the result of very exact and elaborate studies, to the effect that there are no radiating muscular fibres in the iris; in other words, that the dilator iridis has no existence in man. It is found, he says, in some animals, and especially in those which have oblong pupils, whether vertical or horizontal, and in the form of fasciculi at the extremities of the slit. He absolutely denies the existence of such fibres in the human eye, and asserts that the fibres hitherto described under this name are nerve-fibres. These revolutionary assertions were received with respect and attention, because the investigator was known to be a careful and competent anatomist. If his declarations should be confirmed, and they will not be lightly accepted, we must find out a new theory for the active dilatation of the pupil. A good deal of physiology will have to be cast into a new form. It is true that the anatomical discussion has not been closed on this point, but in favor of the existence of the dilator stand the names of Merkel, Henle, and Iwanoff among recent investigators. Eversburch has in his possession the preparations of Iwanoff, who died a few years ago, and he knows the nature of the contest into which he enters.

The uses of the actual cautery in superficial forms of corneal ulceration and in some other superficial processes, especially in those of micrococcic origin, were discussed both here and in Copenhagen. There seems to be a general consensus as to the usefulness of this treatment in selected cases of superficial corneal disease, viz., in ulcus rodens, in superficial suppurative processes, in atonic ulcers, and by Nieden in xerophthalmus. Nieden will shortly announce his views in full in an article in the *Archives for Ophthalmology*. He presented a most delicate and elegant form of galvano-cautery which he had devised, and to which he had applied a very delicate and promptly acting key invented by Professor Sattler. Another form of cautery is in use in the Heidelberg Eye Clinic, which has been devised by Professor Becker, and is a very small and utilizable Paquelin cautery. Both these instruments can be handled with nicety and delicacy, and without frightening the patient, and also in most cases without giving him any pain. This treatment, as well as the scraping of such ulcers by a sharp spoon, as does Meyer, of Paris, is founded on the micrococcic theory of the pathology of these processes, and marks another forward step in ophthalmic therapeutics.

Optico-ciliary neurectomy as a preventive of sympathetic ophthalmia has not passed out of practice, as to a considerable degree has become the case among us. So able an observer and logical a reasoner as Professor Schweigger, of Berlin, recommends its performance and holds it in higher esteem than enucleation. He divides the internal rectus muscle to gain easy approach to the nerve, and he lifts it from its bed by a sharp double hook and excises 10 mm. of it. He is said to be extremely skilful in this proceeding, and the very small disturbance which he causes in the structures of the orbit may perhaps explain the success which he has had and the confidence which he expresses in its prophylactic virtue. Among over a hundred cases which furnished the material for his conclusions, in two cases he saw occur in the opposite eye an acute neuro-retinitis, with opalescent infiltration, etc. There was no reduction of vision either central or peripheral. In two weeks the appearance

had entirely passed away without treatment. He regards this inflammation as coming to pass, because neurectomy had been attended by unusual effusion of blood into the sheath of the divided nerve—that this had obstructed the lymph channels, and a process had thus been set up which travelled around by the chiasma to the opposite eye, and there expressed itself in a lymphatic neuro-retinitis such as is well known to occur. The explanation is very plausible. Another most peculiar observation among his cases was, that in one of them the anterior part of the eye was normal, and when the nerve was excised the pupil at once expanded to an extreme degree, more widely than it is possible for atropine to produce. He put eserine into the eye and found that by it the pupil at once became contracted, as is usual with this drug. To this Professor Laqueur justly remarked that absolute proof was thus afforded that, as has been before claimed, the action of eserine is not upon the nerves of the iris, but is directly upon the muscular fibres. A beautiful experiment in physiology was thus made with conclusive result.

A most laborious statistical paper was presented by Professor Becker to elucidate the question whether it is true, as has lately been averred by Deutschmann, that cataract is the result in many cases of chronic Bright's disease. To arrive at a trustworthy conclusion, Professor Becker summed up the results of a most exhaustive and exacting series of studies, first of patients with cataract, whether they had albuminuria; then of persons within the limits of age when both cataract and albuminuria chronica may occur, who were not aware of any trouble of sight or of the kidneys, as to whether they might have incipient cataract with or without kidney trouble, and these persons he found in insane asylums, in poor-houses, in retreats, and among the patients in his clinic and elsewhere; thirdly, he went through the records of 250,000 autopsies which had been made in Vienna of cases of Bright's disease, to see how often cataract had been noted to exist. The final sum of this vast amount of labor was treated according to the principles of the mathematics of the doctrine of probabilities, and the outcome of it all was found in the conclusion that Deutschmann was not justified in his assertions, and that cataract cannot with reasonable and just probability be declared to be an effect of, although it may occur with, degeneration of the kidneys.

It was a delightful feature of this meeting, the presence of the simple-minded and clear-thinking Professor Arlt, who, because he had passed the statutory line of seventy years, had been retired from the chair of ophthalmology in Vienna two years ago. The loving and pious respect in which he was held was delightful to observe. He rose to his feet several times when clinical themes were being discussed, and the range of his memory of facts and cases, and his clear utterances, showed that the edge of his intellect had not been blunted. As a proof of his mental activity, he brought with him a treatise on "Glaucoma," which had just come through the press and in which, in 142 pages, he sets forth with characteristic clearness and acumen, and with great wealth of knowledge both of books and of cases, his views on this disputed theme. Certain I am, from what I have read of it, and from confidential and candid conversation with him, that we shall owe to him much valuable instruction on this subject. His views are sure to make a deep impression and to gain wide acceptance. I hope the book may be elaborately reviewed in some American journal, so as to get the marrow of it in English.

It were hardly modest to speak of the kindly way in which American visitors are treated in these meetings; a man afflicted with less than the average modicum of vanity runs great risk of an acute exacerbation of his frailty, while the average man with average self-esteem simply loses his head.

With much regard, very sincerely,

HENRY D. NOYES, M.D.

A SUGGESTION TO ESTABLISH FREE BATHS AND WASHING-HOUSES FOR USE DURING THE YEAR.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In my reports to the New York Board of Health, during the years 1868, 1869, and 1870, when I made a survey of the Twentieth Sanitary Inspection District, in my capacity of Assistant Sanitary Inspector, I already advocated the establishment of free baths as a sanitary measure for the improvement of the condition of the poor. Since then free baths have been supplied by the authorities in this city during the summer months, but no provision has been made for this luxury during eight months of the year, viz.: from October 1st, to about June 1st. To supply this deficiency, I have recently again laid this matter before the Board of Health and the Mayor of this city, who kindly approved and indorsed my views regarding the establishment of free baths and washing-houses, and promised to co-operate with me to carry out my suggestions, as far as lay in their power.

Regarding the usefulness of such institutions, for obvious reasons, hardly anything needs to be said. But, being a measure of general utility, as a preventive against so-called zymotic diseases—which I would term filth-diseases—I herewith make some suggestions as to how the means could be supplied wherewith to provide these establishments.

1. Part of the excise moneys could be used for this purpose, besides private contributions, if the attention of the public were called to the necessity of such buildings, wherein the poor could bathe and wash their linen free of charge. I am already assured by Mayor Edson, as stated above, that as the head of the Board of Apportionment and of all the city departments he would use his influence for securing from the city the necessary building lots, whereupon these proposed establishments could be erected.

2. The Legislature should pass a law—additional to the Tenement-House Law—whereby every owner of a house should be taxed, say, one dollar annually, additional to the present taxes, for every tenant occupying his house.

3. I would suggest that every emigrant coming to this country should be advised, if deemed necessary by the examining physician at the place of landing, to make use of these cleansing establishments on entering the territory of the United States.

4. Every prison and police station and other public institution should have a bath attached for the use of the inmates.

5. The lower classes, employed by the city, county, or State, should be requested by their superiors to avail themselves of the use of the free baths and washing-houses. Proprietors of large establishments, factories, stores, stables, etc., would follow the example of the authorities by employing by preference, all other conditions being equal, clean and, therefore, healthier people. Consequently a moral pressure could be exercised over servants and employés generally for their own good.

6. While I was stationed on the frontier, and at other military posts, as Post Surgeon in the United States Army, I have often regretted the absence of baths, for the use of the soldiers, connected with their barracks or quarters. The United States Government would no doubt greatly ameliorate the sanitary condition of our soldiers and sailors by erecting free baths for them wherever practicable.

If means were provided by the public authorities or philanthropists for facilitating the constant washing and cleansing of persons and dwellings, I think we would have less of cholera, yellow fever, and other epidemics of filth-diseases, and the germs of many diseases would be, in part at least if not effectually, eradicated.

In closing these remarks and suggestions, written for the consideration and with a view of enlisting the co-

operation of some of the readers of THE RECORD, and *pro bono publico*, I will only add that the plan of establishing cheap, though not free, baths and washing-houses has been tried in London, Eng., within the past four or five years I believe. These are situated in the following parishes: (1) Paddington, (2) Marylebone, (3) St. Pancras, (4) St. Giles, (5) Lambeth, etc. The general arrangement there is: A private bath costs twopence (about four cents) a head, including towels; a higher-class bath, twelve cents; swimming bath, the same price; privilege of use of large room for washing, drying, ironing, etc., at nominal rates. The baths are generally self-supporting and very extensive. Some houses have several swimming baths, each swimmer having a separate box to dress in, etc. RUDOLPH TAUSZKY, M.D.

610 LEXINGTON AVENUE, NEW YORK.

NO MEDICAL HISTORIES OBTAINABLE FROM ST. LUKE'S HOSPITAL, NEW YORK.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Will you be so kind as to publish the enclosed correspondence, which speaks for itself.

I was called to see a gentleman under the circumstances as stated in my letter, and believing that some information in regard to his former sickness would materially aid me in his case, I addressed a communication to Rev. George S. Baker, making inquiries to that end. The enclosed letters are the one I received from him and my answer. I think it should be known, to the medical community at least, that no physician can gain any information in relation to a party who has been a patient in St. Luke's Hospital.

JOS. P. FESSENDEN, M.D.,
Member Medical Staff, Salem Hospital.

SALEM, MASS., October 4, 1884.

P.S.—I thought it best upon the whole to ask you to give place to the correspondence, instead of the public journals.

ST. LUKE'S HOSPITAL, NEW YORK, September 20, 1884.

DR. J. P. FESSENDEN, Salem, Mass.:

DEAR SIR: It is positively against the rules of this hospital to communicate what we learn with regard to the diseases of our patients to any one, save to the patients themselves, if they request it, or to the District Attorney, if he demands it for purposes of justice. We shall not deviate from this rule in the case of Mr. B——. Probably you are not aware that your own is the third letter which has been written me on the same subject.

Yours truly, GEO. S. BAKER,
Pastor and Superintendent.

DEAR SIR: I was exceedingly surprised to learn from your communication, received this morning, that no information relating to the sickness of a patient who had been in your hospital could be imparted to the attending physician of the patient after he left your hands. We have an idea in this vicinity that we have some pretty good hospitals, such as the Massachusetts General and Boston City, both of which are ready to extend such courtesies to the family physician and both of which would receive the condemnation of the public if they refused so to do. The patient, after an absence of six years, without any knowledge of him coming to his sister during that time, suddenly appeared at her home (she is a widow and in straitened circumstances), penniless, poorly clothed, much emaciated, and mentally unsound. I was called to see him and had and now have no doubt but that some information in regard to his sickness in St. Luke's Hospital would aid me in the treatment of the case. You are probably aware that any information conveyed by patient, family, or friends, is held sacred by the attending physician, and you refuse positively to communicate such information for the *benefit of the patient* whose welfare is entrusted to me. It seems to me to be an unheard-of procedure. I do not know that the fact that you have been written to, asking for information three times, concerns me in the least, even did I know it, which I do not.

If I can elicit no facts from you, I shall publish your letter in the New York papers, with an explanation in regard to it. I think the public should be made acquainted with such a rule of the hospital for its guidance.

Very respectfully yours,
J. P. FESSENDEN, M.D.,
Member Medical Staff, Salem Hospital.

SALEM, MASS., September, 1884.

[It is difficult to understand upon what grounds any public hospital can refuse to give to a medical gentleman in charge of a patient such information as was solicited by our correspondent. We should like to have some explanation on this point from the hospital authorities.—ED.]

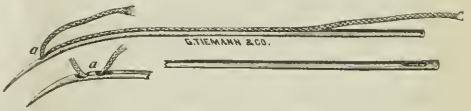
New Instruments.

A NEW NEEDLE FOR CONTINUOUS OR INTERRUPTED SUTURE.

BY G. WACKERHAGEN, M.D.,

BROOKLYN, N. Y.]

THE under surface of this needle is grooved to within three-eighths of an inch from the point, when the channel is crossed by a narrow depressed bridge; under this the thread is passed, and returning over the bridge again falls into the groove of the needle, thereby preventing obstruction to its passage through the tissues. There is



also an eye near the blunt end so that it may be used for continuous suture.

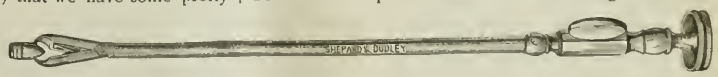
The special advantage claimed for this needle is that it is not necessary to remove the needle-holder while operating by interrupted suture. The needle having passed through the flaps, the thread is caught by dressing-forceps and the needle withdrawn.

A NEW BULLET FORCEPS.

BY WILLIAM R. LEONARD, M.D.,

NEW YORK.

THE accompanying cut represents a new and improved bullet forceps. For the last twenty years nothing has been done to improve the method of extracting bullets. All



instruments in use for this purpose up to the present time are deficient in many respects, and are apt to slip after they have engaged the bullet. The instrument here presented consists of a steel cylinder inclosing a steel stylet riveted to two jaws, which are hinged and terminate in short steel teeth, which take a firm hold upon any part of the bullet by burying themselves in its substance. The instrument is introduced closed. When the bullet is reached the jaws are opened by turning the screw at the proximal end, and the instrument is then pushed up so that the jaws grasp the bullet; a few turns of the screw bury the teeth in the bullet firmly and make it part and parcel of the instrument.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from September 28 to October 4, 1884.

BENTLEY, EDWIN, Major and Surgeon. Granted two months' leave of absence, with permission to apply for two months' extension—to take effect upon assignment to duty in the Department of Texas of Surgeon F. L. Town. S. O. 121, Headquarters Division of the Missouri, September 30, 1884.

BARTHOLF, JOHN H., Captain and Assistant Surgeon. Assigned to duty at Fort Ringgold, Texas, as Post Surgeon. S. O. 129, par. 5, Headquarters Department of Texas, September 25, 1884.

CRAMPTON, L. W., Captain and Assistant Surgeon. Granted leave of absence for one month and ten days. S. O. 60, Headquarters Division of the Atlantic, October 2, 1884.

GIBSON, R. J., First Lieutenant and Assistant Surgeon. Assigned to duty as Post Surgeon, Fort Winfield Scott, California, relieving Assistant Surgeon A. S. Polhemus. S. O. 115, par. 1, Headquarters Department of California, September 23, 1884.

POLHEMUS, A. S., First Lieutenant and Assistant Surgeon. Upon being relieved, to report to commanding officer Fort McDermit, Nevada, for duty as Post Surgeon. S. O. 115, par. 1, Headquarters Department of California, September 23, 1884.

WHITE, R. H., Captain and Assistant Surgeon. To report to commanding officer Angel Island, California, as Post Surgeon, relieving Assistant Surgeon C. K. Winne. S. O. 115, par. 1, Headquarters Department of California, September 23, 1884.

WINNE, C. K., Captain and Assistant Surgeon. Upon being relieved, to report to commanding officer Benicia Barracks, California, for duty as Post Surgeon, relieving Surgeon C. C. Byrne. S. O. 115, par. 1, Headquarters Department of California, September 23, 1884.

EVERTS, EDWARD, First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, with permission to leave the limits of the Department. S. O. 145, Headquarters Department of Colorado, September 24, 1884.

Official List of Changes in the Medical Corps of the U. S. Navy, during the week ending October 4, 1884.

STEWART, HENRY, Surgeon. Granted leave of absence for one year, with permission to leave the United States. October 15, 1884.

EDGAR, JOHN M., Passed Assistant Surgeon. Detached from the Nantucket and placed on waiting orders. September 29, 1884.

HARMON, G. E. H., Passed Assistant Surgeon. To the Naval Academy. September 30, 1884.

BERTOLETTE, D. N., Passed Assistant Surgeon. From the Naval Academy to the Dolphin. October 4, 1884.

ROGERS, BENJAMIN F., Passed Assistant Surgeon. To the Naval Academy. September 30, 1884.

COOKE, GEORGE H., Surgeon. From the Naval Academy, and placed on waiting orders. October 2, 1884.

WHITING, ROBERT, Passed Assistant Surgeon. From the Naval Academy and placed on waiting orders. October 4, 1884.

BREAKFAST.—In the time of Henry VIII., the Queen's Maids of Honor had each a chet loaf, a manchet, a *gallon of ale*, and a chine of beef for their breakfasts. What did they have for dinner?

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending October 4, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
September 27, 1884.....	2	46	19	4	13	27	0	0
October 4, 1884.....	1	60	32	2	22	39	0	0
Deaths.								
September 27, 1884.....	0	13	3	5	5	10	0	0
October 4, 1884.....	0	13	0	2	5	19	0	0

LOVAGE.—The *levisticum* of botany has, on Dr. Johnson's authority, a virtue in the relief of rheumatism. He says: "Take equal quantites of flour of sulphur and flour of mustard seed, make them into an electuary with honey or treacle, and take a bolus as big as a nutmeg several times a day, drinking after it a quarter of a pint of the infusion of the root of lovage. The relief is speedy and lasting." But perhaps sulphur will answer alone. Lovage, like sassafras, belongs to a large class of plants containing an essential oil, which have always been employed as carminatives, diuretics, emmenagogues, and digestive stimulants, in flatulent dyspepsia, amenorrhœa, dropsy, and rheumatism.

FOR HYPERHIDROSIS OF THE FEET Dr. Duhring has used the following with good results:

℞. Zinci oleati..... ʒ ij.
Amyli,
Talci .....āā ʒ iij.
M. Sig.—Dusting powder.

This was applied to the feet after they had been washed with a lotion of tincture of belladonna.

THINGS TO TRY.—Dr. Robert A. Reid, of Boston, in his *Eclectic Journal*, suggests the following "things to try" when ordinary measures fail: Try pop-corn for nausea and vomiting of pregnancy; try sun-bath for rheumatism; try cranberry poultice for erysipelas; try lager beer as a gargle for sore throat; try eating fresh radishes and yellow turnips for gravel; try eating onions and horse-radish to relieve dropsical swellings; try taking cod-liver oil in tomato catsup if you want to make it palatable; try snuffing powdered borax up the nose for "cold in the head;" try hard cider—one glassful three times a day—for ague or rheumatism; try breathing the fumes of turpentine or carbolic acid to relieve whooping cough; try a cloth wrung out of cold water put about the neck at night, for sore throat; try planting sunflowers in your garden if you live in a malarial region and the travelling is bad.

A CASE OF ROSE COLD.—Dr. F. B Streeter sends a history of a case of "rose cold," as suggested by Dr. Mackenzie: "Mrs. William B——, aged thirty-five years, native of this State, of Dutch descent, married, and barren. With the exception of an uterine disease, which is the probable cause of her sterility, she is in a fair state of health. I first saw her some three years since. She was suffering from an intense coryza, and attributed it to the fact that while walking in the dark she had accidentally brushed against a bush laden with full-blown roses. She explained that she had been affected thus by roses since her childhood, and as she is a lady of intelligence her case seems to be clearly one of 'rose cold.' She has no catarrh or any other disease of the respiratory system, nor is she similarly affected by the pollen of any other flower or plant."

The Medical Record

A Weekly Journal of Medicine and Surgery

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Original Articles.

CONTRIBUTIONS TO

THE ANATOMY OF THE LEMNISCUS.

WITH REMARKS ON CENTRIPETAL CONDUCTING TRACTS IN THE BRAIN.

BY E. C. SPITZKA, M.D.,

PROFESSOR OF NEURO-ANATOMY AND PHYSIOLOGY IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL.

(Continued from page 397.)

II.

III.—THE COMPONENT OF THE LEMNISCUS WHICH PASSES THROUGH THE INTEROLIVARY LAYER.

IN the sequel it is my intention to discuss only a portion of the axial fibre-systems which have been by various authors [1] designated as lemniscus, under that name, leaving the *critique* of this designation to the concluding remarks. In the lower (caudal) part of the oblongata these tracts are found in such relations as to enable us most readily to understand their connections with the important spinal tracts, and the older authorities and some of the more recent ones include the olivary fasciculus, which is larger than the interolivary layer.

A section made at the level indicated in the accompanying figure reveals the following prominent gray

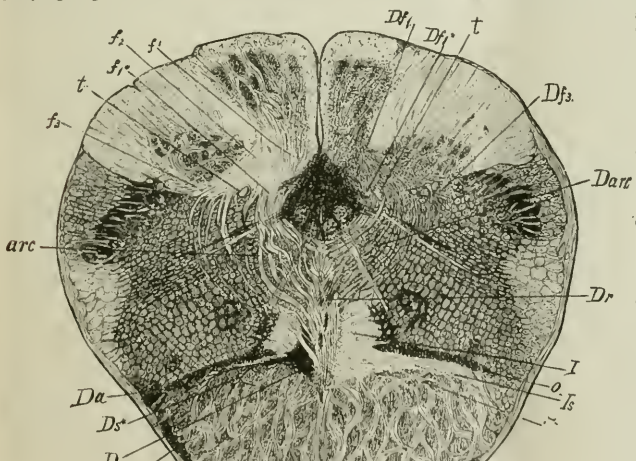


FIG. 3.

(ganglionic) substances: First, the nuclei of the columns of Burdach and Goll; second, the ganglionic substance of the column of Rolando; [2] third, the gelatinous gray substance surrounding the central canal, in whose distal portions the hypoglossal and vagus (vago-accessorius?) nuclei begin to appear; fourth, the reticular gray substance in

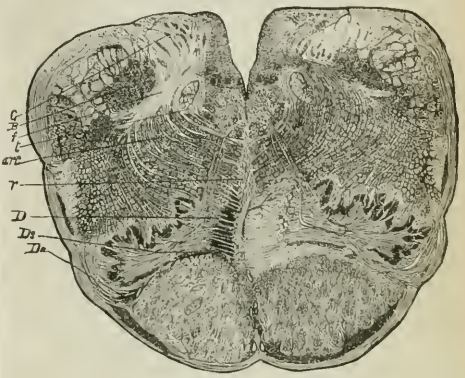


FIG 4.

the field intermediate to the bridge of gray matter (which unites those nuclei which, for brevity's sake, I shall term the nuclei of Goll, Burdach, and Rolando), the central gelatinous substance, and the lemniscus; fifth, the olivary nucleus, which in this level is represented only by that portion which is known as the internal accessory olive (*o*); sixth, the small nuclei interpolated in the external arciform fibres (*na*). Of these various gray substances the nuclei of Burdach and Goll and the olive have relations to the lemniscus, thus indicating what an extensive territory this fibre agglomeration occupies.

Surrounding on its medial and dorsal confines the nucleus of Goll, and capping dorsad the nucleus of Burdach, are the fibre-tracts of the columns of the same name. As we proceed cephalad we find that the mass of these columns undergoes a gradual reduction. In the main this reduction appears to be effected by the entry of the fibres into the nuclei. These are fielded off by intersecting delicate fasciculi into numerous subnuclei. The nearer the spinal cord, the more compact (and small) is the nucleus of Goll (*nucleus funiculus gracilis*); the nearer the middle of the middle olivary altitude, the more scattered and subdivided are its cell-groups, and the more distinctly does it appear as if the whole mass of the column of Goll broke through the nucleus to separate into the strands of the internal arciform fibres (Fig. 4). Much as the anatomical appearances suggest the existence of a direct connection between the column of Goll and the internal arcuate fibres mentioned, a study of the phenomena of secondary degeneration does not sustain the existence of such a connection as a direct one.

In the case of secondary degeneration to which I have

[1] Except the one in which the term is employed by Meynert in his last work, Psychiatrie, Part 1., which is over-ample, and evidently intended to justify certain of his older and untenable views, which he seems disinclined to abandon.

[2] This contains three categories of ganglionic substance, viz., the convoluted lamina corresponding to the gelatinous head of the posterior horn of the spinal gray, the subjacent paler staining spongy gray substance, and the intercalated gray islands in the root itself, containing cells like those of the nuclei of Goll and Burdach. The absence of the gelatinous head in reptiles would seem to indicate a relation to one of the specialized forms of sensation, whether of contact or temperature, more likely the latter.

alluded, I found that the fasciculi interpolated in the nuclei of Goll and Burdach showed a reduction in size on the side *opposite* to the degenerated lemniscus field. The third and fourth figures accompanying this paper illustrate this relation. In Fig. 3, the dark field *Da*, *Ds**, *D*, which represents the descending degeneration, connects by diagonal raphe strands (*Dar*c), which pass into the degenerated fields *Df*1, *Df*1*, and *Df*3, and these in turn connect with the degenerated internuclear fasciculi in the nuclei of Goll and Burdach.

The part of the lemniscus degenerated in the above case corresponds to Flechsig's interolivary stratum.[1] In a section of the level, shown in Fig. 4, this stratum is L-shaped (the dark area *D*, *Ds*, *Da*), consisting of a vertical field (*D*) which fills up the interval between the raphe (*r*), the internal accessory olive, and the pyramid tract, and a nearly horizontal field (*Ds*) which lies between the halo of the denticulate (main) olivary nucleus and the pyramid; it extends with an angular swelling to the point of emergence of the hypoglossal nerve-roots *Da* (see corresponding designations of Fig. 3). Inasmuch as the degeneration can not be traced into the tracts included in Burdach's and Goll's columns, but only into the nuclei of these columns, it is to be inferred that the latter are interpolated between two divisions of one and the same tract. In other words, that the spinal columns of Goll and Burdach terminate, anatomically speaking, in their nuclei, and that from these "interrupting" nuclei a physiologically continuous tract arises which passes through the fields *f*1, *f*2 (Fig. 3) into the arcuate fasciculi (*arc*, Figs. 3 and 4), decussating in the piniform decussation,[2] and after crossing the median line continuing brainward, in the interolivary stratum of the oblongata and pons (*I*, Fig. 3).

As in cases of prolonged typical locomotor ataxia the columns of Goll undergo secondary degeneration, it is to be assumed that the essential primary lesion of that disease affects the nutrition of those columns secondarily either by the involvement of the posterior rootlets or of the gray substance in which they terminate or through which they pass.[3] The connection of the column of Goll with the sensory nerves of the inferior extremity has been positively established. It is evident, then, that the column of Goll conveys brainward certain impressions which occur in the posterior (inferior) half of the body. It is exceedingly probable that those impressions which are most regularly affected in locomotor ataxia, namely, those informing the subject of the position of his lower limbs in space, which enable him to regulate their muscular movements in conformity with the resistance to be overcome, and which are ordinarily classed under the head "muscular sense," are the ones conducted by these columns. In order to become appreciated, however, these columns must be connected with higher centres than the nuclei of Goll and Burdach; the regulation of these movements which are most constantly affected in locomotor ataxia, while not altogether removed from cerebellar control,[4] is a function of the cerebral hemispheres. It is evident, therefore, that after interruption—for some thus far inscrutable purpose—in the nuclei of Burdach and Goll, another tract *must* leave these stations to reach the cerebrum. This tract is the one just described and visible in its decussation in Figs. 3 and 4, that is, the interolivary layer of Flechsig.

Meynert long ago recognized the necessity of establishing a connection between the posterior columns of the spinal cord and the cerebrum. The method he followed in delineating his projection system was to take physiological and pathological facts as so many guides in the labyrinth of cerebral fibre-tracts, and then to fit the demonstrable nerve-strands that happened to correspond, as he supposed, to the required physiological paths into the maps thus constructed. Knowing that the posterior part of the internal capsule conveyed sensory functions, and that the posterior columns of the cord did likewise, he traced the required connection between them through his so-called upper or sensory pyramidal decussation into the lateral part of the pyramids, along these into the lateral part of the *pes pedunculi*, and thence by an easy transition into the posterior division of the internal capsule. A diagram representing this supposed tract is extant in Huguenin, whose work is in the main a popularization of Meynert's system, and in many places evidently inspired by the black-board diagrams which this great master of modern cerebral anatomy illustrated his lectures with.

Grossly erroneous as Meynert's representation just detailed is now known to be, in many features it is correct; and this has been (intentionally or unintentionally) overlooked by those who have condemned his views.

It is a fact that the continuation of certain portions of the sensory tract from the cord to the brain decussates, in the upper fine-bundled decussation called by Meynert the "upper decussation of the pyramids." The view held to-day differs from Meynert's chiefly in regard to topographical nomenclature: 1. As the decussation in question is not connected with the pyramid tract proper, it is no longer called the upper "pyramidal" decussation. Flechsig's followers might perhaps term it the "decussation of the interolivary stratum." In want of any other brief designation, and recognizing that it could no longer be considered a part of the pyramidal decussation, I termed it the piniform decussation.[1] Certainly it resembles in section nothing so much as a fir-cone (Fig. 4, near *r*; Fig. 3, near *Dr*). 2. Meynert was partly correct in tracing the fibres of this decussation to the lateral part of the pyramids, as these bodies were considered at the time he wrote his treatise. The pyramid tract of to-day covers a much more limited area than the one assigned to it by anatomists of the last decade. Even Henle, who wrote after Meynert, represents them as extending dorsad, between the raphe and the roots of the twelfth pair, nearly to the floor of the fourth ventricle, making them include the *strata* interolivaria and the inner division of the reticular field of Meynert.[2] 3. Even as the pyramids are demarcated to-day there is some little justification for Meynert's theorem. *Fibres from the nuclei of Goll and Burdach do pass into a field connected with the true pyramid tract.* I expressed a surmise to this effect in the description of the case of secondary degeneration repeatedly referred to in the course of this paper. It was doubtful to me then whether the fibres thus traced by their degeneration (*Ds**, Fig. 3) represented a communication of the interolivary and the pyramidal tracts, or whether they were the fibres which, leaving the pyramids, pass to the hypoglossal nuclei, and (subjected to the pressure of the shrinking field of the interolivary layer through which they passed?) underwent a slight retrograde degeneration.[3] Opposed as this latter alternative appeared to be by the general rule supposed to govern secondary degenerations, it became definitely disposed of to my mind after a complementary study of secondary degeneration of the pyramidal tracts. Not only is it impossible to trace degenerated fibres to the hypoglossal nuclei in any such situation as that indicated by *Ds**, but *the very fasciculi within the pyramid*

[1] From the supposed connection with Meynert's *stratum intermedium* I applied that name to the interolivary extension. I have resolved for the present to discontinue its employment, as the same designation has been employed in such different ways by Wernicke and Meynert himself.

[2] Upper fine-bundled or sensory decussation of the pyramids of Meynert.

[3] It has been lately shown that the columns of Clarke, which are by Flechsig supposed to have a relation to the posterior rootlets, are similarly involved in advanced cases of this disease.

[4] On comparing a number of types of this disease it will be found that in some the ataxia has no actual cerebellar character, but in others not. In the latter the same complaint found in *cortical ataxia*, that distance is misjudged or the length of the limb or a segment of it seems increased or decreased, is made.

[1] Architecture and Mechanism of the Brain, Chicago Journal of Nervous and Mental Diseases, 1879, 1880.

[2] It is only on this assumption that his designation of the mesal accessory olive as a "nucleus pyramidalis" is comprehensible.

[3] A Contribution to the Morbid Anatomy of Pons Lesions; beiog No. 1, Series III., of Contributions to Neuropathology, based on researches conducted in the author's laboratory. Reprinted from the American Journal of Neurology and Psychiatry for November, 1883.

field which are affected in degeneration of the interolivary stratum were found comparatively normal in a case of intense double descending (degeneration of the pyramid tracts.[1] Whether these fibres, after leaving the interolivary layer, re-enter it, abandoning their intra-pyramidal course, I am at present unable to determine. But the fact here stated shows that there was much more basis for Meynert's view than Flechsig seem to have been aware of.

Flechsig assumes, for the sake of simplifying matters, that the fibres of the posterior columns which represent the cephalic continuation of the posterior roots of the spinal nerves abut in the nuclei of the columns of Goll and Burdach, without committing himself directly to the view that all of them do so. If we believe that the laws of secondary degeneration are invariable, that the course of such degeneration is always in the direction of functional transmission,[2] then, undoubtedly, the columns of Goll and Burdach must terminate in the nuclei named after them, with that portion of their fibres which, in my opinion, represent Flechsig's interolivary layer continued down (after nuclei interruption); for in my case of a secondary degeneration of six years' duration not a degenerated fibre could be traced beyond the nuclei, though these themselves were atrophic.

In speaking of these fibres, Flechsig battles with an imaginary opponent. He says,[3] "The view that the posterior columns pass to the cerebrum chiefly through the mediation of the interolivary layer (and the longitudinal fibres of the reticular formation?) has much more in its favor than the view that the posterior columns are exclusively connected with the cerebellum." He does not inform us who announces such a view. The one generally held up to the time of Flechsig's writings, was that of Meynert, who traced a part of the posterior columns (correctly) to the cerebellum, and another portion to the cerebrum, through his so-called "upper fine-bundled decussation of the pyramids." Flechsig was destined to confirm this view of Meynert's, with some toponomical corrections above referred to, to demonstrate much more satisfactorily than Meynert ever dreamed of doing that this decussation embodied the continuation of posterior column fibres, and to correct some erroneous details in Meynert's scheme. All this does not justify his repeated innuendoes against the latter on the one hand, and the suppression of its meritorious features on the other. Indeed, it would not be difficult to show that if Flechsig does not owe to Meynert the hint which led to his following the embryological method with such signal and acknowledged success, he would be compelled to confess to having had but an imperfect knowledge of the cerebral anatomical literature extant when he undertook his great work.[4]

The "atrophy method," and the "development method" of Flechsig have undoubtedly cleared up much in the cerebral labyrinth which other methods were inadequate to unravel; and if it be true, as I have repeatedly stated to my class, that the progress made in cerebral anatomy during the last ten years, quantitatively speaking, exceeds that made during the previous one hundred and fifty years, it is to these two methods that the credit is chiefly due. But while recognizing the service which Gudden, Flechsig, and their pupils have done and are doing, it is not yet demonstrated that their methods are as exact as their advocates allege. To show the justice of this doubt it would suffice for me to refer to the various controversies which Mayser and Forel, on the part of the Gudden school, and Flechsig have indulged in. The results derived by both methods ought to be identical, if both were absolutely correct. They differ, however, in some respects and several details; and notwithstanding that it has been implied—and particularly by one who has undertaken to interpret and report the results of industrious continental laborers, after a hurried visit to their laboratories—that the day of microscopic sections is past, I believe that neither the results of the atrophy method nor those of the embryonic method should be accepted unless they are gauged by a study of sections and made to harmonize with their revelations.[1]

In order to show that those who have most severely criticised Meynert, and at the same time most sedulously belittled the extent of our indebtedness to him, are not themselves free from errors, often far more serious than those committed by that authority, I will refer for a moment to the latest proclamations made by Flechsig regarding the cerebellum.

Flechsig is undoubtedly justified in attaching great importance to the peculiarities of tract development, observed in a child born without a cerebellum. It is difficult to understand, however, how he can state: "This brain united the advantages of developmental and degenerative differentiation of the central white masses, inasmuch as all fibre-tracts connected with the cerebellum were absent or atrophic, while all others were developed to an extent corresponding to the end of the period of fœtal life, being partly myelinic and in part amyelinic." The cerebellum is too important an ingredient of the central mechanism to be eliminated without producing far-reaching defects in development elsewhere. It is not probable that the remote centres connected with the cerebellum were, as such, normally developed; the mental disturbance noted with defective development of the cerebellum is probably to be explained on the ground that its absence is associated with other defects, indeed, that it is only an intensified expression of a general defect in cerebral development. This is the proper explanation of the intellectual deficiency noted with cerebellar atrophy, and not the wild and startling tentative suggestion of Flechsig,[2] who asks whether the existence of the commisural cortical gray of the cerebellum does not explain (by vicariation) the absence of mental disturbance noted in cases where the corpus callosum is absent! This suggestion exceeds in fancifulness, and in lack of foundation, anything ventured by Meynert, who is harshly criticised by Flechsig, but who rarely abandoned the channels of logical reasoning based on the facts as known, or supposed to be known, in his day, to such a grievous extent, at least not before Flechsig wrote.

It is an interesting and important question, one requiring great care and a comparison of numerous anatomical and experimental facts to determine, what qualities of sensation are transferred to the brain by the piniform, or upper (sensory) decussation of the interolivary stratum. Wernicke[3] first formally considered the inconsistency between the well-known phenomenon of crossed hemianæsthesia in spinal hemisection and the assumption of a redecussation in the oblongata. Many who have never published their doubts probably raised the above questio in their minds. More recently Starr[4] has reviewed th entire question and collected a number of valuable an not generally accessible cases, which justify his arriving at

[1] This I found to be as described in specimens of another's unpublished case of descending degeneration of both pyramid tracts, and in a unilateral case of my own.

[2] Which is not the case. [3] Plan of the Human Brain, p. 22.

[4] For in the following lines is contained the suggestion and essential feature of Flechsig's method, and one of his conclusions imperfectly expressed; indeed, Flechsig knew of them, referring to them in his book; recognizing that Meynert is the first to suggest that the development of myelin in the nerve-tracts was destined to reveal important features of the development and structure of the central nervous system. "The absence of the striæ acustici in all animals does not indicate an absence of its nervous bundles, but only the invisibility of these due to their axis cylinders being unprovided with the myelin sheath. The development of myelin corresponds to the acme of cerebral evolution, hence their absence in the new-born and their greater frequency, according to J. Engels, in the bodies of adults. For the same reason the *pes pedunculi* of the new-born *is gray instead of white. The unsimultaneous development of the medullary white in different parts of the brain is indeed a most important subject for searching study*" (Stricker's Collection, vol. ii., pp. 770–71).

[1] I refer here only to studies made on the human subject, when speaking of actual discrepancies.

[2] Plan of the Human Brain, page 42, foot-note. It may serve to show that the day of speculation as to this *terra incognita* of brain anatomy is far from waning, that while Flechsig suggests a possible vicariation of the cerebellum for deficiency of the intellectual organ *par excellence*, Starr, with all the well-established facts elucidated by Flechsig at his disposal, concludes that it is in part a centre connected with vegetative life (The Sensory Tract in the Central Nervous System, Alumni Prize Essay, College of Physicians and Surgeons, by M. Allen Starr).

[3] Lehrbuch der Gehirnkrankheiten, ed. 1., 1881. Not in American hands till 1883.

[4] Loc. cit., p. 52.

conclusions, as he supposes, very different from those of Wernicke and my own;[1] my own position having been to some extent misapprehended by Starr, as he has since recognized in a note to the *Journal of Nervous and Mental Diseases*, in which his article appeared. With regard to Wernicke, I think he has fallen into a similar misunderstanding. He says that his results of a study of cases is opposed to the course of the sensory tracts as described by Wernicke, for several reasons, among them, because "these tracts are supposed to leave the medulla and to pass by way of the cerebellum to the pons." The further text of his article shows that Starr attributes to Wernicke the view that *all* sensory tracts pass by way of the cerebellum, and *none* by way of the pons. In reality Wernicke's position is very conservative, he discusses the entire question, and concludes that there are several possible channels by which sensory paths may reach the cerebrum, which he details under the headings I. and II., A. (*a* and *b*), B. (*a*, *b*, *c*). Of these, all but the first are enumerated by Starr, who implies that Wernicke rejects the alternative under I., namely: a path of single decussation (running through) the most lateral portion of fibres of the lateral "motor" field of the tegmental part (of the oblongata and pons), then above the exit-level of the trigeminus in the neighborhood of the ascending trigeminus root, (situated) in the spinal cord, in the "lateral layer bounding the gray substance," (then) decussation in the gray substance immediately above the respective posterior roots.[2]

I do not think that the language of Wernicke on page 262, where he discusses his own and Kahler's case, necessarily implies the interpretation Starr has given to it. If so, it is difficult to see why Wernicke should enumerate the above tract in his conclusions. He simply discusses a number of "important considerations and doubts,"[3] which are encountered by him in his attempt to consider the tract mentioned as the one. In the very paragraph where he expresses these doubts he says that "there must be separate (distinct) sensory paths in the oblongata," a conclusion at which I arrived some years ago,[4] and which seems to me to-day to be the only one that can be harmonized with those facts stated in the introductory remarks of the present paper. Starr's conclusion as to the course of the tracts for tactile perception repeats the hypothetical tract deduced by Wernicke in very many particulars. The doubts which troubled Wernicke are based on facts which have not been disputed to this day. They are as much a subject for consideration now as then.

The collection of cases made by Starr is accompanied by the following conclusions (p. 61): "Those sensory impulses which have not decussated in the spinal cord cross the median line in the sensory decussation of the medulla, and pass upward through the interolivary tract to the lemniscus, in which they ascend to the internal capsule. These are the sensations included under the term muscular sense." This proposition would seem to be as well based as the dictum that lesion of the motor tract in the internal capsule produces contralateral paralysis. The cases of Kahler and Pick, Meyer, Senator, and my own, cited, prove that lesion of one interolivary layer produces contralateral ataxia; indeed, in my case the anatomical proof of the decussation—the degeneration crossing in the direction of functional involvement—was as complete as the clinical evidence. This fact is furthermore in harmony with a statement of Brown Séquard, that in his puzzling symptoms of spinal hemisection the muscular sense does not follow the rule of spinal decussation, but suffers on the same side with the motor function. If Ferrier's recent contradiction[5] of Brown-Séquard's theorem stands, then we are in the same quandary as before with regard to the alternative stated by Wernicke, that if the sensory paths *all* decussate in the oblongata, they must redecussate twice in the cord, if the facts of capsular and spinal hemianæsthesia are to be harmonized.

Fig. 5.

As far as the tract we are now considering is traced from the nuclei of Burdach and Goll to the anterior (cephalic) end of the pons is concerned, our knowledge is very satisfactory. Above this point it is involved in some obscurity. Flechsig believes that a part of the

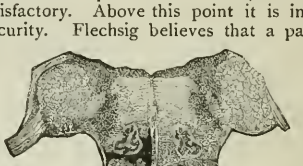


Fig. 6.

lemniscus, as far as I can glean, the one he believes to correspond to our tract, passes directly into the internal capsule. This would appear to be the simplest solution. Elsewhere he states that fibres derived from the putamen[1] and the nucleus caudatus, after coursing through the internal capsule, pass through the dorsal part of the pes pedunculi, being crowded against and pressed between the ventro-lateral processes of the substantia nigra. He considers it possible that this fasciculus is connected with the substantia nigra, for a large portion of it becomes lost here. The remainder he traces cordward as a ventro-medial accompaniment of the lemniscus layer, and supposes that it is ultimately united with the gray matter of the pons. This tract degenerates in the descending direction when diseased in the adult. Elsewhere[2] he speaks of the same fibres as intruding themselves between the lemniscus layer and the raphe "lower down," and as leaving the pes to enter the tegmentum. Certainly his first declaration, as to a probable connection with the nucleus pontis, is contradicted, not alone by the second statement, viz., that it passes into the tegmentum, but also by the course of the tract as indicated in his diagram, which is made to run quite parallel with his "interolivary layer," and into it.

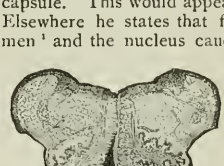


Fig. 7.

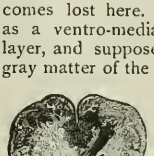


Fig. 8.

The interolivary layer of Flechsig is, according to him, the continuation of the interolivary layer upward. Two-thirds of this fibre system is represented in that part of the interolivary layer which is in immediate contact with the olives. He adds, with a query of his own, "and has no (?) connection with the upper pyramidal decussation." This query was certainly a saving afterthought. The secondary degeneration described

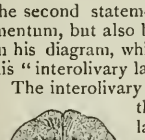


Fig. 9.

[1] The Sensory Tract to the Fore-brain, note in the Chicago Medical Review, July 12, 1881; and Morphological Relations of the Cerebellum, ibid., July 5th.

[2] Wernicke: Loc. cit., vol. i., p. 265, lines 12–17.

[3] "Wichtige Bedenken." "Bedenken" is best rendered as a mixture of "reflection" and "doubt," for which there is no accurate equivalent in English; it implies hesitation.

[4] Architecture of the Oblongata, New York Medical Journal, September, 1881. The view of separate tracts for muscular and tactile sense is expressed in this article, but has been much modified in detail since.

[5] He claims that the muscular seose path decussates in the cord.

[1] The outer of the three (or four, and in some subjects five) "articuli" of the lenticular nucleus.

[2] Plan of the Human Brain, p. 20.

in a case of pons lesion by myself appears to dispose of this question. In it the degeneration was limited to that very portion of the interolivary layer, and the corresponding half of the upper pyramidal decussation was almost entirely eliminated.

Another statement of Flechsig's demonstrates that he has confounded the relations of the two divisions he has made. He says the smaller division—that is, the part remaining of the lemniscus after the larger portion adjacent to the olive is subtracted—is connected with the upper pyramidal decussation, and that its fibres do not degenerate for any distance downward." Now, it is the very part which does connect with the pyramids, but which lies adjacent to the olives, which degenerates *downward* (cordward) for its entire anatomical extent, as shown in the diagrams and fac-similes on the opposite page. Flechsig is also wrong in asserting that the greater part of the lemniscus (two-thirds) degenerates downward,[1] giving, as he does, the impression that this is an invariable rule. In my case the *ascending degeneration* monopolized by far the larger *lemniscus field*, all of it, in fact, with the exception of that innermost portion which some authors fail to include in the lemniscus proper, and an outer part whose position is not well settled.

Monakow produced *descending degeneration* of apparently the same field which Flechsig terms inter-olivary layer, in the cat. As in my human case, this degeneration underwent a decussation, chiefly in the lower olivary[2] plane and passed into the nuclei of the columns of Goll, which, as in my case also, were atrophic. Monakow's description[3] of this tract, which degenerated after destruction of the parietal lobe,[4] following a course through the external and posterior nuclei of the thalamus into the dorsal part of the subthalamic region, corresponds more closely to the appearances found in my case than do any of Flechsig's delineations and declarations. The correspondence between the results obtained by the atrophy method in the cat, and previously by myself in a case of secondary degeneration, herein repeatedly referred to, are so close that I may be permitted to detail some anatomical facts observed in the lion, the dog, and the cat, in sections prepared by means of the bichromate of potash hardening, microtome cutting, and carmine staining methods, as bearing on the presumable course of this part of the lemniscus tract in man. The advantage of a study of these animals is that the pyramid, pons, and pes are small, and particularly that the pons fibres do not, as in man, crowd the tegmentum dorsad, compelling certain of its tracts to follow as arched a course as in man; this is a source of much confusion to the topographical anatomist.

In a section made flat-wise through the brain axis, that is, parallel to the basi-cranial ideal plane, in the dog, the intricate relations indicated in Fig. 10 are exposed.[5] In the latitude of the trapezium (23) a faint sagittal streak on either side indicates the interolivary layer (21), the oblongata portion of which is seen (27) mesad of the *dentoliva* (28). There appears to be a ganglionic interpolation between it and the major part of the lemniscus (26). Now, instead of sweeping to the side in the pons, to pass into the L-shaped lemniscus field of the mesencephalon, the interolivary layer is seen to occupy a distinct field, buried in the nuclear substance of the pons

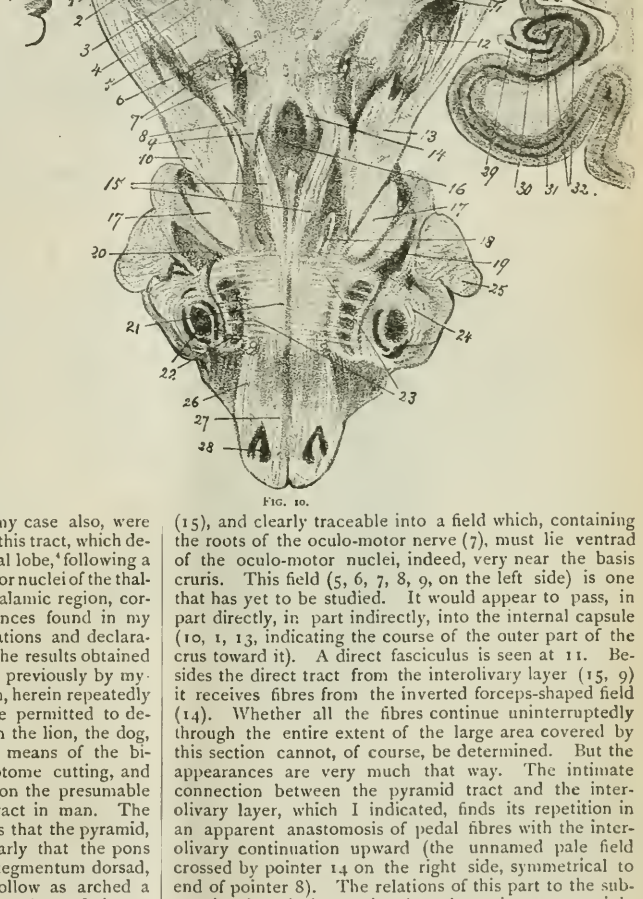


FIG. 10.

(15), and clearly traceable into a field which, containing the roots of the oculo-motor nerve (7), must lie ventrad of the oculo-motor nuclei, indeed, very near the basis cruris. This field (5, 6, 7, 8, 9, on the left side) is one that has yet to be studied. It would appear to pass, in part directly, in part indirectly, into the internal capsule (10, 1, 13, indicating the course of the outer part of the crus toward it). A direct fasciculus is seen at 11. Besides the direct tract from the interolivary layer (15, 9) it receives fibres from the inverted forceps-shaped field (14). Whether all the fibres continue uninterruptedly through the entire extent of the large area covered by this section cannot, of course, be determined. But the appearances are very much that way. The intimate connection between the pyramid tract and the interolivary layer, which I indicated, finds its repetition in an apparent anastomosis of pedal fibres with the interolivary continuation upward (the unnamed pale field crossed by pointer 14 on the right side, symmetrical to end of pointer 8). The relations of this part to the substantia nigra is interesting, but the main part certainly passes through without interruption.

In the human brain, owing to the causes mentioned, the relations are not so simple. The appearances are, however, against the view that the interolivary layer passes exclusively into the field known as the lemniscus; the bundle from the pes to the tegmentum appears to be, in part at least, connected with it. In Fig. 11, which represents a section taken in a plane, slightly raised dorsally in front, as compared with Fig. 10, the interolivary layer is shown in as complete a continuity as it can be, without preliminary distortion of the brain axis. It is here seen that the interolivary layer, beginning just above the pyramid decussation at *c*, passes on either side of the raphe (*d*, *c*, *b*, *a*) detaching (apparently) fibres (at 7 and 6), which, moving out more and more laterad (5), reach the lemniscus field of the mesencephalon (4). But the fibres

[1] Loc. cit., p. 26.

[2] In speaking of the olive, I refer to the olive *par excellence*, the one in the oblongata; the so-called "upper olive," I term the nucleus of the trapezium.

[3] Experimental Contributions to Our Knowledge of the Pyramid and Lemniscus Tracts, by v. Monakow, Correspondenzblatt f. Schweizer Aerzte, 1884, Nos. 6 and 7, per Mendel's Centralblatt, May 1, 1884.

[4] Not necessarily homologous with the same lobe in man.

[5] There is a comical resemblance between the figure when inverted, and the head of a bull or bear, and when upright that of an elephant. The former may facilitate a topographical understanding. The snout of the bull is the olivo-pyramidal region, the nostrils being represented by the main or dentate nucleus of the olive (28), the eyes with the lids are represented by the nuclei of the trapezium or superior olives (23, 22), the ears by the *pontis brachium* or middle cerebellar peduncle (25), and for horns, lovers of the fanciful may take their choice between 17 and 19. The bulk of the head comprises the trapezium and pons, the neck is equivalent to the mesencephalo-crural region.

hugging the middle line do not pass into this field at *a*, they dip ventrad apparently; this is the locality where so much confusion prevails, which can be cleared up by filling in the required gap with the tracts 9 and 14 of Fig. 10.

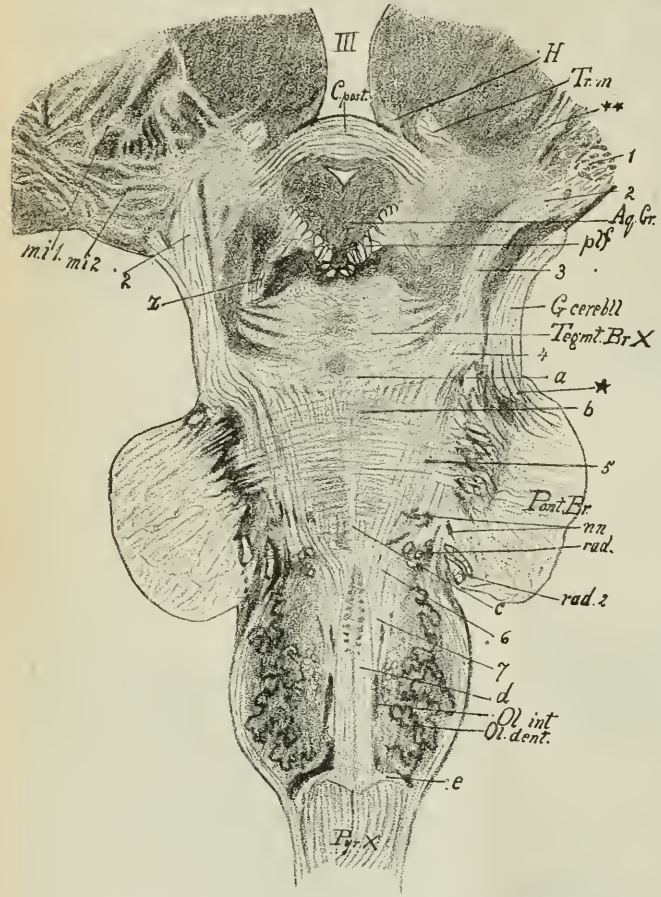


FIG. 11.—Section in Basilar Plane of the Brain Axis of a Syphilitic Subject. (Autopsy and case by Prof. James L. Little.) The numerals 1 to 7 relate to the lemniscus tracts in general; the letters *a* to *e*, to the mesal continuation of the interolivary layer, bundle from *pes* to *tegmentum* of Henle (see Part II.); *III*, posterior part of third ventricle; *C. post.*, posterior commissure; *Aq. Gr.*, gray matter surrounding the aqueduct; *H*, habennular bundle; *mi* 1 and 2, thalamic laminæ; **, unnamed tract, from analogy with 2 and 4 of Fig. 10, possibly the capsule seeking part of the interolivary (muscular sense) tract; *pf.*, posterior longitudinal fasciculus; *G. cerebll.*, Gratiolet's direct fasciculus from the cerebellum to the cerebrum; *, its cerebellar origin (nearly); *Tegmt. Br X.*, Wernekinck's commissure (?) decussation of *tegmenta brachium* (*brachium conjunctivum*); *Pont. Br.*, *pontis brachium*, middle cerebellar peduncle; *rad.*, roots of the seventh and eighth cranial nerves; *Ol. int.*, internal accessory olive; *Ol. dent.*, dentate or main olivary nucleus; *Pyr. X.*, decussation of true pyramids; pointer 5 is in the direction of the transverse pons fibres, a thin veneer of which has been cut.

The almost direct passage of the main part of the lemniscus toward the internal capsule is well seen at 2 and 1.

If my surmise as to the equivalence of the unnamed tract, indicated by the double asterisk, with those indicated by the numerals 2 and 4 in Fig. 10 be correct, it becomes comparatively easy to complete the channel of the muscular sense. In the accompanying section from a monkey (Fig. 12 [1]) the numerals 9 and 8 indicate this tract exposed lengthwise; its direction is clearly to the parietal lobe. It becomes apparent how Meynert could erroneously trace this bundle to the occipital lobes, in less fortunate sections, inasmuch as it closely skirts the optic radiation of Gratiolet. The direction of the main (lateral and middle) part of the lemniscus is indicated by the numerals 25, 27, and 28. If, as is surmised, the tract for muscular sense (9, 6) separate from the cutaneous tract (25, 27) in its course through the medulla and pons, becomes united to or intermingled with it in the thalamo-lenticular division of the capsule, we can readily understand why all qualities of sensation would be affected in capsular hemianæsthesia, while they may be separately involved in the pons and oblongata. The close proximity of the former and the motor tract 10 would be consistent with the frequently overlooked disturbance of the muscular sense in hemiplegia. The tract-course here supposed is consistent with v. Monakow's experiments, and justifies the designation of Rinden-Schleife (cortex lemniscus), which he has given the interolivary tract

As satisfactory as the picture of the interclivary layer is in sagittal sections taken through its pontine course, as difficult is it to identify every corresponding area of that course in transverse sections. In sagittal section, the stratum intermedium (interolivare) is a beautiful arched fasciculus, covering Gall's *ligne de separation* already referred to (Part II.). At one point it does not appear to adhere to that line, but to be broken up, and where not broken up to take a more dorsal course. This portion, however, resumes the characteristic relations in the caudal half of the pons. The deviation corresponds to a ganglionic intercalation described by Roller, which is reticular, like a trellis-work. It is found at the point where the tegmentum is most reduced in its dorso-ventral diameter (owing to the exclusion of the tegmenta brachium and the inferior cerebellar peduncles from this field).[1] In transverse sections at this level a distinct field is seen, dorsad of and encroaching on the trellis-work; it extends to the raphe and overlaps the mesal end of the horizontal lemniscus field; this is probably the (diverted) dorsal part of the intermediate tract.

Every specimen in my possession indicates that a large part of this fasciculus becomes lost in the substantia nigra. At the same time a portion continues directly forward as in the dog. This part has been regarded by Wernicke [2] as a bundle from the pes to the lemniscus. It is accurately represented in Figs. XIII., 50, 52, and 53 (*p*, *p'*), but there is a curious inconsistency. In Fig. 48 he represents this fasciculus as giving off the most anterior transverse pons fibres, as if it exhausted itself in their formation, while in the level above and below this one he has the fasciculus divided transversely and occupying identical situations. He has undoubtedly confounded it with another bundle in this section. This bundle, correctly named by Wernicke, lies on the latero-dorsal aspect of the prepontine fossa, where the pes is free of the pons, it occupies the slope on each side of the interpeduncular depression. As Wernicke in Fig.

[1] For this animal as well as the lion, I am indebted to Dr. Cooklin of the Central Park Zoological Department.

[1] The projection-system of the brain axis is reduced here, through the deflection to the cerebellum of certain tracts from above and below.

[2] Lehrbuch.

XII. (p. 89) terms a bundle occupying a corresponding situation the ansa lenticularis (Linsenkernschlinge), it is possible that through the intervention of this fasciculus

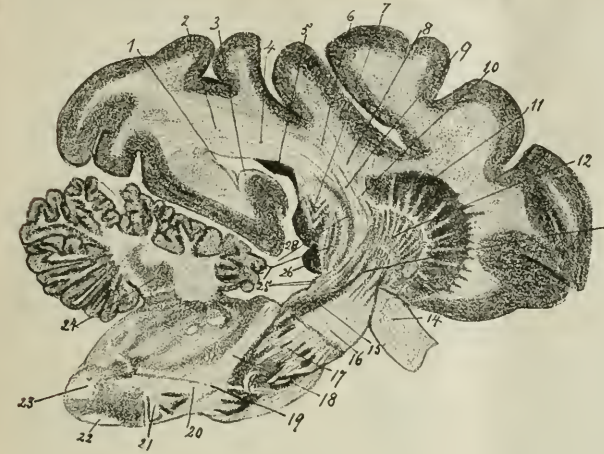


Fig. 12.—Section Diagonal to the Sagittal Plane, Deviating Laterad above, through a Monkey's Brain. (× 1¼.) 1, post-cornu; 2, 4, optic radiations of Gratiolet (hemianopsia tract); 3, cornu ammonis; 5, tail of caudate nucleus (*caudex corporis striati*); 6, 9, muscular sense tract (?); 8, 10, posterior part of voluntary motor tract (the reader must not be misled by its *apparent* relation to the posterior part of the lenticular nucleus, which is not touched in this section and extends, avoiding this plane, much farther back); 11, 12, lenticular nucleus (putamen and middle articulus); 14, optic chiasm; 18, 20, 25, lemniscus, fields; 22, direct mylo-cerebellar tract; 24, dentate nucleus of cerebellum; 26, geniculatum internum; 7, geniculatum externum; 27, radiations of lemniscus into thalamic laminæ.

it reaches the higher destination. The optical appearance of the two bundles in their designable course is different.

(To be continued.)

CORYZA VASOMOTORIA PERIODICA ("HAY ASTHMA") IN THE NEGRO.

With some Remarks on the Etiology of the Disease.[1]

By JOHN N. MACKENZIE, M.D.,

surgeon to the baltimore eye, ear, and throat charity hospital.

The absence of so-called "hay asthma" in the negro has been brought into prominence by recent writers on the subject, and notably by Beard, as an argument in favor of the important rôle which race is supposed to play in the etiology of the disease. The following case derives its peculiar interest from the fact that, so far as I am aware, it is the first recorded instance of the affection in a race in which the possibility of its occurrence has been denied.

J. M——, aged thirty-five, unmarried, a tall, well-proportioned, respectable colored man, came, September 6, 1884, to my clinic at the hospital to be treated for "hay asthma." His history may be briefly summed up as follows: He has always been remarkably healthy, with the exception of a tendency to catch cold upon exposure to the most trivial exciting causes. Ever since his earliest recollection, the emanations from hay have invariably excited a coryza of great severity, lasting from three to seven days and then subsiding. Handling hay at any season of the year, or even unpacking articles enveloped in straw, always bring on sneezing, lachrymation, flushing of the conjunctivæ, and obstruction of the nostrils. For the past four years has had an almost constant sensation of "stuffiness" in the nostrils, with dyspnœa on exertion accompanied by a slight post-nasal discharge, and the attacks of coryza have become much more frequent and have been associated with distressing asthma.

The attack is ushered in sometimes by a tickling or itching sensation in the upper and back portion of the throat and nose, sometimes by violent sternutation. The nostrils become suddenly obstructed, a profuse watery discharge is excited, the eyes become red, swollen, and painful, and the lids slightly puffed. There is always increased lachrymation. Cough is sometimes present, but forms an unimportant feature of the paroxysm. In a short while, generally in the course of an hour, the asthmatic symptoms supervene. The extreme dyspnœa thereby produced renders him perfectly helpless. The asthma is worse at night, so that during the period of his attack he gets very little sleep, the dyspnœa often amounting to orthopnœa. The latter is relieved after an hour or more by violent sneezing, followed by a copious watery discharge from the nose. After this he falls asleep, to be awakened in a short while by another attack of asthma, which is in turn relieved by sternutation. He sleeps habitually on his right side, with the head elevated. This state of affairs lasts from the second week in August to late in September, when the coryza and asthma disappear, leaving him in a state of nervous prostration and with a slight nasal discharge. During the period of "cold" the apex and sides of the nose frequently become excessively vascular, and the skin is cast off as the disease subsides. During the past four years, the paroxysms have been increasing in severity, the present attack having compelled him to give up his position as a waiter in one of the hotels of the city. The disease may come on at any season of the year, if he is exposed to its exciting causes, but he rarely suffers between April 1st and the second week in August. At the latter period he never escapes. Among the exciting causes in his case, apart from the emanations from hay, are exposure to sudden atmospheric changes, coal dust, the use of tobacco, the inhalation of tobacco smoke, and the greasy smell of the kitchen. The dust from cleaning various articles, dusting carpets, door-mats, etc., invariably provokes coryza. The odor or presence of flowers, light, and diet have no effect at any season of the year. He has never had any symptoms referable to a disordered nervous system before the appearance of the asthmatic feature of his disease. Since then has become restless and irritable and is subject to attacks of nervous debility.

The only relief he has ever gotten, apart from the natural termination of the paroxysm by sternutation, has been from the inhalation through the nostrils of the fumes of some proprietary pastils.

Physical examination.—No disease of lower respiratory apparatus. Simple congestion of nasal and lower pharynx. Posterior extremities of the lower turbinated bones engorged, swollen, bright red, and covered with a translucent film of mucus. Posterior nares symmetrical. Hypertrophic enlargement of the erectile tissue of the posterior part of septum on right side. Anterior extremities of inferior turbinated bodies slightly swollen, bright red, and present the appearance of two little rounded prominences jutting out from the outer half of the nasal floor. The interval between them and the middle is considerable, and the latter are remarkably prominent, running in an oblique direction from behind, upward and forward. Septum straight, face symmetrical. The mucous membrane covering the anterior end of the middle turbinated body especially swollen, but the swelling can be readily reduced with the probe, the action awakening no reflex.

Systematic exploration of all accessible portions of the nasal chambers with the probe gave rise to no reflex except at one spot. Along the inner edge of the left inferior turbinated body, about one and one-fourth

[1] Read before the Clinical Society of Maryland, October 3, 1884.

inch by measurement within the nostril, the *most exquisite paroxysm of asthma followed the simple contact of the exploring probe.* The sonorous and sibilant râles were loud enough to be heard in the adjoining room. The conjunctivæ became flushed, painful, and covered with tears, and a thin watery discharge accumulated in the nostrils. These symptoms lasted for a few moments and passed away, leaving the condition as described above.[1]

My views in regard to the predisposing and exciting causes of the disease popularly known as "hay asthma," have been given in a condensed form elsewhere,[2] and the design of the present article is to supplement these by calling attention to some additional facts derived from personal study of the affection.

While the majority of cases that apply for treatment come from the educated classes, and from those of fair intellectual development, it must not be forgotten that it is precisely this class that seek intelligent medical advice, or are likely to come within the range of circulars distributed by those investigating the complaint. Looking upon the disease as, to all intents and purposes, a coryza, generally dependent upon abnormal excitability of the vaso-motor centres, it does not seem to me justifiable to confine the operation of its causes within the limits of a particular century, or to explain its phenomena on the hypothesis of national or race peculiarities. I meet with it at all ages and in every condition of life, in private and in hospital practice. I find it more common among women than is generally supposed, and am inclined to think that the question of sex is one of unimportant etiological significance. I have twice observed the disease in several members of the same family, and it is possible that a peculiar excitability or deranged condition of the vaso-motor system may descend from father to son, and determine the appearance of the affection in the latter; but it is difficult to say how far the influence of inheritance, as originally suggested by Wyman, enters as a factor into its causation.

In the majority of cases that have come directly or indirectly under my observation, the paroxysms are induced by a variety of agencies differing entirely in their character and mode of operation. In others there is apparently only one exciting cause. The latter may be in operation only during certain periods of the year, or may provoke an attack, without regard to season, whenever applied.

It may be said, in general, that the exciting cause may produce its effect, (1) by direct or indirect (reflex) irritation of the sensitive nerves of the nasal mucous membrane; (2) through olfactory impression (so-called "idiosyncrasy" of olfaction); or (3) through simple association of ideas; or the same result may be brought about (4) by physical or mental overexertion, or (5) emotional excitement.

Typical paroxysms occur in some persons at any season of the year, from sudden changes in the temperature or from electrical disturbance of the atmosphere, and so far as my observation goes, a prominent position should be accorded to meteorological conditions among the exciting causes.

Pollen is only one of a host of exciting causes, and there is reason to believe that in some cases in which it is supposed to be the excitant, it has little or no influence at all. The paroxysm may be produced as a reflex phenomenon from irritation of a distant organ,[3] and a case has been brought to my notice by a distinguished medical friend, in which the ingestion of a few grains of quinia is sufficient to produce a group of symptoms which, if they were excited by smelling a rose, would be called "rose cold." More accurate observations are necessary to the formulation of definite conclusions concerning the occurrence of this disease in the inferior races. While it is doubtless true, that the physical and moral forces of civilization encourage its development in the higher walks of life, they probably do so only in so far as they predispose to abnormal excitability of the nervous system in general, or to catarrhal and asthmatic affections.

In the black race, the exquisite delicacy of the sense of smell, the prominent development of the turbinated bones, and the consequent increased amount of surface exposed, would seem to invite the paroxysm in those surrounded by the conditions that provoke it. I have several times met with reflected phenomena in the negro referable to disease of the nose, and belonging to the same category of reflex affections; and it is possible that a fair proportion of cases of the convulsive asthma which occur in that race may have a similar origin.

While the above case is the only instance of the occurrence of the disease in the negro that has come under my personal observation, it is quite possible that, if looked for, it may be more frequently found.

[1] The sensitive spot was destroyed by a stellate incision with the small knife of the galvano-cautery. On the night of the operation the patient had a slight attack of asthma, which passed off, however, in the course of an hour. For the next five days he enjoyed perfect immunity from the disease. He then went on a fishing expedition with a party of gentlemen, and the first night out contracted a violent cold in the head from sleeping on the damp ground, and with the coryza the attacks of asthma returned. At the present writing treatment has been suspended until the attack of coryza subsides.

[2] This journal, July 19, 1884.

[3] See paper referred to above.

DANGER FROM PLASTER-OF-PARIS JACKETS.

With a Description of the Woven-wire Jacket.

By SAMUEL W. SMITH, M.D.,

NEW YORK CITY.

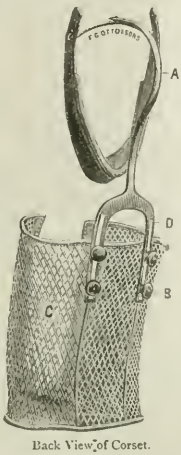
In the science of medicine, as in other sciences, there is a tendency to follow certain recognized plans or systems of procedure, to the ignoring of original methods, and a tendency to forget that while all may have advantages, and promise good, all must have in some case disadvantages that tend to evil. This fact has been forcibly impressed upon my mind in the use of the plaster-of-Paris jacket in cases of Pott's disease of the spine.

The following cases will illustrate my meaning:

Case I.—Daisie D——, aged seven. Born of healthy parents, her own health was good until she reached her fifth year, when it was observed that she constantly rested her head upon her hands when not at play. She soon became very irritable, and refused to play with other children. At this time she was taken to the family physician who discovered an angular curvature of the spine, including the last cervical and first and second dorsal vertebræ. In the course of time a Tiemann & Co.'s splint with jury-mast was put on. The child did well and returned to its amusements as usual. Within about a year the child had grown so much that the splint could not be worn without a slight change being made in it. At this time the patient came under my care for a bronchial affection, which disappeared after appropriate treatment of two or three weeks' duration. In accordance with the advice of friends she was taken by the parents to a surgeon of this city, by whom a plaster-of-Paris jacket was substituted for the Tiemann & Co.'s splint. For a day or two the child appeared to be quite as comfortable as with the former apparatus, but within a week I was again called to see her. I found her suffering from capillary bronchitis. The attendance of the surgeon who had put on the plaster jacket was requested by me, and he at once removed it. On the third day the little patient died of capillary bronchitis. My own opinion is, that the primary cause of death in this case was due to the sudden cooling of the body of the child which was effected by the hardening and drying process of the plaster composing the jacket.

Case II.—Nellie R——, fourteen years of age, from Connecticut. Came to the Demilt Dispensary in the spring of 1881, suffering from lateral curvature of the spine. Born of healthy parents; her own general health good; no bronchial disease. I put on a plaster-of-Paris jacket and ordered daily exercise with the pulley and chin support. In three weeks she returned to my office

suffering from a severe bronchitis, loss of appetite, and irritable cough. I removed the jacket, and in a few weeks the patient returned entirely recovered from the bronchial difficulty. I then applied a second jacket, doing so at my office, where the room was properly warmed to prevent the likelihood of "catching cold." In two months she returned and informed me that during all this time she had suffered from a troublesome cough; but so anxious was she to get rid of her deformity, that she had preferred to endure the cough rather than have the jacket removed! However, I removed it, and ordered a corset, made over a slight untempered steel frame, and covered with firm material, something after the plan of Professor L. A. Sayre's spinal wire corset. The corset was easily made by taking the removed plaster jacket and filling it with plaster prepared for the purpose. This gave me a complete cast of the deformity. The suspension treatment was still continued, and with the greater ease and comfort of the corset, my patient steadily improved. The bronchitis and cough disappeared in a short time.



Back View of Corset.

During my service at the Demilt Dispensary several other patients to whom I had applied the plaster jacket gave me the same kind of trouble; so that about two years ago I abandoned the use of it, excepting in such cases of Dispensary patients as were unable, through poverty, to pay for the corset. In all cases in which I was thus obliged to use the plaster jacket, I opened the front and so arranged it that removal at bedtime could be easily accomplished, as also the replacing of it before arising.

The corset which I have used instead of the plaster-of-Paris jacket can be made of any strong, pliable material, over the untempered steel frame; but that which I have more recently had made is of light tinned wire, interwoven in the iron frame, and shaped over the plaster cast of the deformed patient. Professor F. H. Hamilton's "Wire Gauze Hip Splint" suggested to me the use of the same material for my corset. It is easily arranged for the use of the jury-mast when needed, by means of screw loops on the two steel rods which give support to the back. The legs of the jury-mast having slits in them can easily be made fast by a screw.

In addition to the disadvantages of wearing a plaster-of-Paris jacket for consecutive months, alluded to above, it seems but reasonable to suppose that by this long-continued pressure of the chest walls, their natural growth should be stunted, their capacity for lung expansion much lessened, and a road laid out which may lead on to phthisis.

40 West Twenty-fifth Street.

Treating Tape-Worm with Chloroform.—Dr. L. E. Borcheim, of Atlanta, Ga., writes that he has treated two patients suffering from tænia solium, with chloroform, etc., according to the method of Dr. J. G. Brooks (Medical Record, Vol. 26, Nos. 4 and 11). In both cases he was unsuccessful. The patients complained of feelings of intoxication, the pulse rose, purging was brisk, but no tape-worm. On the other hand, Dr. N. S. Darling, of La Forte, Ind., states that he administered, after a fast of twenty-four hours, chloroform ʒ j., with castor-oil ℥ ij., to an adult male, with the result of expelling a tape-worm thirty-seven feet in length. The head, it is believed, was brought away with the mass.

A CURIOUS INJURY FROM A PITCHFORK.

By A. A. ELLIOTT, M.D.,
STEUBENVILLE, O.

On August 19th I saw, in consultation with Drs. G. A. Shane and J. F. Whittaker, the following case:

William P——, a farmer, thirty years of age, weighing about one hundred and fifty pounds, muscular development good, while sliding from a hay-mow came in contact with a pitchfork which was standing tines upward against the contents of the mow. One of the prongs penetrated the right hip, at a point behind and on a level with the greater trochanter, and broke off close to the socket.

Found him lying on the porch of the house, to which he had been taken, complaining of severe pain in his hip, abdomen, and back, and greatly frightened. On examination we found a penetrating wound in the right hip, and just beneath the surface a metallic substance was detected and removed, being the lower portion of the fork-tine, one and three-quarter inch in length, and fitting accurately at its larger end, the stump remaining on the handle. Measurement of the remaining tine showed it to be thirteen inches in length, leaving about eleven inches yet to be accounted for.

The patient complained greatly of his back, and a view of it disclosed an enlargement on the right side of the spinal column in the lumbar region, which was exquisitely sensitive. This apparent swelling showed no bruising or evidence of recent contusion, and inquiry elicited no history of its existence previous to this time.

We proceeded, under an anæsthetic, to further explore for the missing steel, and found the direction of the wound to be upward, inward, and forward, and succeeded in following its track for about five inches with a probe, but without detecting any foreign body, nor could we by enlarging the wound and making deep pressure determine its presence.

He was allowed to come out from under the influence of the ether in order to get the benefit of his sensations under our manipulations, and his thigh was flexed on his abdomen, deep pressure again made, together with abduction and adduction of the thigh, producing no increase of pain in any region.

After several hours he was again etherized, and the most critical examination made in the wound and by the rectum, and the swelling on the back laid open and thoroughly explored; all to no purpose, and the wounds were left unclosed and dressed with water dressing.

The case resolved itself into the following conditions: 1. Head of the fork-tine penetrated and lodged in the body of the man; if so, could it be removed? 2. If in his body, had it penetrated the pelvic cavity or was it buried in the dense muscular structure of the hip? 3. Could it be possible that the first portion of the tine had, by the force of the falling body, broken off and by its elasticity flew away, and, the fall being unbroken, the fork again came in contact with the body and penetrated with the remainder? These questions were taken up and concluded upon: 1. There was no positive evidence furnished by the examination that the tine was lodged in his body, and, were it positive, an operation for its removal would involve a dissection of the muscular structure of the hip, and perhaps an opening of the abdominal cavity, both under the circumstances unjustifiable operations. 2. The abdominal pain was taken as suspicious at least, and the bladder and rectum had not as yet acted, leaving their injury in doubt. 3. The possibility of this condition was acted upon, and the barn most thoroughly searched for the missing tine, but it was not found.

We now concluded to leave the case to nature, and the patient went on doing well, his bowels and bladder performing their functions normally. After a few days, when his fright had subsided, he remembered that the injury to his back was of long ago, and always gave him trouble, and that his abdominal pain had preceded the

injury several days and had been accompanied with diarrhœa, which continued. The wound in the back healed kindly, but the one in the hip continued to discharge profusely, and in the fourth week the whole limb became swollen, and later fluctuation was detected below the sore, which increased in size and extended down the posterior aspect of the thigh, and on October 1st, forty-three days after the accident, it (the tine) was removed, large end first, from the upper portion of the popliteal space. It was eleven inches in length.

The tine was evidently lodged either in the hip or had penetrated the pelvis, the heavy end being dependent, and the muscular action produced by the patient's walking across the floor daily caused it to descend and appear as described.

Since its removal he is doing well, and the indications are that he will make a good recovery.

SOME REMARKS ON THE ASSOCIATION OF TUBERCULOSIS AND ACUTE PNEUMONIA.

By EDMUND C. WENDT, M.D.,
CURATOR TO ST. FRANCIS HOSPITAL, NEW YORK.

THE highly interesting case of tuberculous pneumonia, reported by Dr. Kinnicutt in the last issue of THE RECORD, prompts the writer to offer a few remarks on the synchronous occurrence of tuberculosis and pneumonia, particularly so as a case came under his observation four years ago, which was, in some respects at least, similar to the one observed by Dr. Kinnicutt. The writer considered it at the time a rather puzzling instance of rapidly fatal croupous pneumonia, of an atypical kind. Having occurred before the era of the bacillus tuberculosis and the pneumonia-micrococcus, it will scarcely seem, in the light of our present knowledge, or at least widespread belief, a case observed with sufficient scientific accuracy to warrant any concise deductions. But it should not be forgotten that, despite the rapidly progressive researches of positive experimental pathology, the entire subject of pneumonia, and for that matter of tuberculosis as well, is still a debatable one.

The writer's case, then, is to be regarded merely as a casuistical contribution to a subject of universal interest to the profession in the past, the present, and, it is to be hoped, the future.

Quite briefly stated the case was as follows: A. M——, male, aged thirty-six, married, the father of healthy children, himself the child of healthy parents, was seized with a rigor on a Monday, in March, 1880. He positively denied any previous serious illness, but admitted a tendency to "take cold" easily during changeable weather. He also stated that he had lost one sister from phthisis, at the age of twenty-two. Soon after the chill the patient developed the signs of croupous pneumonia on the right side, which soon spread throughout the entire middle and lower lobes. It was thought to be even encroaching on the upper lobe, when, on the third day, after the rigor had marked the incipience of severe illness, he suddenly died. Clinically the unusual signs had been an excessively high temperature (106⅘° to 107° F., in the rectum), associated with a pronounced typhoid condition. On the last day of his illness the patient also became intensely jaundiced.

At the autopsy the right lung was found hepatized in the middle and lower lobes. The hepatization, however, was grayish only in a few places, the prevailing color being a dark maroon. In the upper lobe, there was merely moderate congestion, some firm old pleuritic adhesions, a few slate-colored nodules with chalky centres, and a rather abundant crop of miliary tubercles. Besides this there were in both lungs quite a number of purulent foci, resembling the well-known multiple abscesses of pyæmia.

The left lung was congested, œdematous, and showed in its upper lobe a condition quite similar to what obtained on the right side, except that there were relatively fewer miliary tubercles and purulent collections. The latter in no instance exceeded in size that of a cherry-pit. The abdominal organs were in general much congested, especially the spleen, which was soft, large, and pulpy. The liver was found in the first stage of icteric hepatitis. The intestines were only moderately hyperæmic, otherwise normal. The common bile-duct was easily pervious. The brain was not examined. There were no miliary tubercles in any other organs, save those already mentioned, viz., the upper lobes of both lungs.

The questions that suggest themselves in this case, as well as in the one reported by Dr. Kinnicutt, are these: Was there a latent unrecognized tuberculosis upon which, as a suitable soil, a fatal croupous pneumonia became engrafted? or was there rather a primary lobar pneumonia, that afforded a fertile soil for the rapid development of acute tuberculosis? Without stopping to weigh arguments pro and contra, the writer would simply state his belief that in his own case the tuberculosis preceded, for weeks or months, the pneumonia; but that the latter would not have proved so rapidly fatal without the coexistence of the former. In Dr. Kinnicutt's case the sequence of events seems less clear. And it is much to be regretted that the microscopical examination of the sputum failed to make matters any clearer.

One thing may be learned from these cases. If croupous pneumonia is an infectious disease, caused by the invasion of a specific micro-organism, and if pulmonary tuberculosis similarly depends upon the entrance into the lungs of peculiar bacilli, then it follows that the growth and multiplication of these two typical and vastly dissimilar varieties of germs within the same organ, so far from being mutually antagonistic, may be reciprocally stimulating, and thus prove doubly dangerous to the host carrying the parasites.

In conclusion, the writer may be permitted to succinctly refer to a case of so-called "mixed infection through tubercular bacilli and pneumonia-micrococci," which was recently reported by Dr. Samter (*Berliner Klin. Wochenschrift*, June 23, 1884), and which seems to have escaped Dr. Kinnicutt's notice.

A weak and marantic-looking old man, aged sixty-five, was admitted to the Posen hospital on March 13, 1884. The patient had a slight, innocent-seeming cough, and a physical examination led only to the diagnosis of senile bronchitis. The patient improved visibly at first. But on April 19th he began to complain of great weakness, and showed an increased tendency to cough. His temperature, however, was below the normal. The scanty viscid sputum resembled somewhat that of ordinary lobar pneumonia. Microscopical examination, however, elicited the interesting fact that, in addition to the abundant presence of tubercle bacilli, the sputum contained a few of the characteristic micrococci of pneumonia. The physical signs of the latter affection subsequently became more marked, and the patient died in a few days from heart-failure. From the record of the post-mortem examination the following points, having a direct bearing on the subject under discussion, may be cited: In the apex of the left lung there were some old cheesy deposits, the entire right lung was intensely congested and in the first stage of pneumonia.

Scattered throughout all the lobes of this lung there was found an abundant crop of recent miliary tubercles, but not a single cheesy or purulent mass was discoverable in that lung. In the small intestine numerous ulcers existed, but there was no evidence there of miliary tuberculosis. It would seem, therefore, that this case resembled my own in several important respects. Dr. Samter is inclined to believe that his patient had latent tuberculosis; and further, that a sudden invasion of the specific germs of pneumonia wrought such changes in already damaged lungs that, an acute miliary tuberculosis was lit up where before there had only existed the slowly smouldering process of chronic tuberculosis.

In the light of the experience of his own case, the writer would fully concur in the above opinion.

102 EAST FIFTY-SEVENTH STREET, October 14, 1884.

Progress of Medical Science.

Adynamic Dilatation of the Stomach.—Dr. Enrique de Argaez has lately published a monograph on the above subject (Paris: Asselin & Co., 1884), which embodies a few novel points touching the pathogenesis and treatment of this interesting disease. In typical cases the author has usually found, on inspection, abnormal prominence of the epigastrium, and, more rarely, visible peristaltic movements of the stomach. The varying quality of resonance obtained by percussion over the colon, the small intestine, and the stomach, enables the observer to define the boundaries of the dilated organ. Succussion yields a characteristic sound, due to the simultaneous presence of gas and liquid in the stomach, and sometimes a metallic tinkling. M. Germain Sée, in whose service, at the Hôtel-Dieu, most of the cases observed by Dr. de Argaez were observed, finds proof of the existence of adynamic dilatation in the presence of gastric resonance at a distance greater than twelve or fifteen centimetres beyond the left mamillary line, or the presence of the gastric succussion sound six hours after eating. Under the head of symptomatology the familiar phenomena of epigastric pain, flatulence, emesis, and constipation are described. The principal causes of the dilatation are general weakness, disturbed local innervation, and excessive ingestion of aliment. The differential diagnosis involves the exclusion of gastralgia in ataxic patients, whose stomachs are not, however, found dilated, and of gastric ulcer. In the latter disease, blood, either pure or partially digested, and presenting the familiar coffee-ground aspect, is often present. This feature is always absent in atonic gastric dilatation. Other diseases to be excluded are alcoholic gastritis, fibrous stenosis of the pylorus, and carcinoma. In pyloric stenosis, whether of a benign or of a malignant character, the entire contents of the stomach are rejected by vomiting, which is not the case in adynamic dilatation. Under the head of treatment the author suggests a diet calculated to leave no undigested residue in the stomach, such as eggs, and tender meats, moderate exercise, gentle laxatives, and the use of Kussmaul's pump and Fancher's siphon-tube, to evacuate the distended stomach. The gastric pain is best relieved by chloroform, administered in small doses by the mouth, and by the continuous galvanic current. The author is in the habit of placing the positive pole at the centre of the epigastrium, and the negative over the sternum. The current is allowed to pass ten or twelve minutes at each sitting.

Why Negroes are Black.—Surgeon-Major Alcock has contributed to *Nature* a communication on the reason why tropical man is black, in which he suggests that, as in the lowest animals pigment-cells placed behind a transparent nerve-termination exalt its vibration to the highest pitch, the reverse takes place when, as in the negro, the pigment-cells are placed in front of the nerve-terminations, and that the black pigment in the skin serves to lessen the intensity of the nerve-vibrations that would be caused in a naked human body by exposure to a tropical sun. In fact, he thinks that the pigment plays about the same part as a piece of smoked glass held between the sun and the eye.

The Treatment of Psoriasis.—In the treatment of psoriasis, Professor Neumann, of Vienna, recommends arsenic in the form of the so-called "Asiatic pills," which are composed thus: Arsenious acid, gramme 1.0; black pepper, grammes 5.0; acacia gum, gramme 1.5; with a sufficiency of distilled water. The ingredients must be thoroughly pulverized and mixed, then enough gum arabic must be added to make two hundred pills. Each pill contains 0.005 gramme of arsenic. These are to be taken each day at first, and gradually increased till ten or twelve are taken. The soft-soap course, as an external remedy, in the form of the "Pfeuffer'schen Cyclus," is strongly recommended in cases of universal psoriasis, and is thus carried out: The patient, undressed, is laid between blankets and is rubbed twice a day for six days, and once a day for three more days, with the ordinary soft soap, one hundred grammes being used each time. The rubbing is conducted in such a manner that the whole of the affected skin is well rubbed each time, and, at each application, a fresh portion is rubbed in with a hard brush in such a manner that the surface commences to bleed. The patient remains in woollen cloths night and day, and on no account is bathing allowed till the fourteenth day, and the longer this is delayed the more easily will the dried skin and soap be separated, and the less pain and sense of stretching will be experienced. In case the bath is taken too early, the skin will feel too short and tight, movement will be difficult or impossible, and rhagades are very likely to occur.

Essential Anæmia.—Dr. Rosenbach, of Breslau (*Deutsche Med. Wochenschrift*), points out three characteristics of this disease. 1. It recurs at certain seasons of the year, so that we can distinguish a spring, a summer, and an autumn form. Cases occurring in winter are extremely rare, and those belonging to the height of summer seem to be the most severe. 2. A peculiar craving for acids is displayed by the patients, which must not be supposed to indicate merely a deficiency of hydrochloric acid in digestion, as any other acid, and even fresh fruit, may supply the want. The desire for acids ought to be gratified, as it is the assimilation of the patient that is at fault, and the organism instinctively demands what is needed. 3. Instead of feeling strongest in the morning, the patients are at their best in the late afternoon and evening, or sometimes even far into the night. Their desire for food follows the same rule, and it is best to let them eat at the times when they feel most appetite, irrespectively of ordinary meal times. It is also of no use to try to ensure brightness and freshness in the morning by making them go early to bed, as they do not sleep until their time of feeling strong has passed off. They ought to be as much in the sun and fresh air as possible, but ought not to fatigue themselves with walking. The anæmia of puberty is not included in these remarks. Dr. Rosenbach has found that the prognosis of the cases of essential anæmia is more favorable when the weakness and want of appetite are periodical, than when the patients are always tired, and refuse all kinds of food alike.

Medicinal Treatment of Habitual Constipation.—Dr. Mortimer Granville, in the *British Medical Journal*, gives three prescriptions for habitual constipation. Where there is a lax and torpid condition of the muscular coat of the intestine, the following is recommended: ℞. Sodæ valerianatis, gr. xxxvj.; tinct. nuc. vom., ʒ j.; tinct. capsici, ♏ xlviij.; syrupi aurantii, ʒ jss.; aq. ad ʒ vj., ʒ ss.; water half an hour before meals. Where there is a deficiency of glandular secretion throughout the intestine the following is useful: ℞. Aluminis, ʒ iij.; tinct. quassiæ, ʒ j.; infusi quassiæ, ad ʒ viij.; ʒ j. after meals. A third form of constipation, which depends chiefly on interruption of the natural habit of periodic discharge, is benefited by directing a regular attempt to go to stool, and to take the following draught the first thing after rising from bed: Ammon. carb., ʒ j.; tinct. valerianæ, ʒ j.; aq. camph. ad ʒ vj.; take a sixth part as directed.

Generalized Sarcoma of the Skin Cured by Subcutaneous Injections of Arsenic.—Generalized sarcoma of the skin occurs very rarely. Professor Köbner's patient (*Berliner Klinische Wochenschrift*), was a girl eight and a half years of age. The tumors, which were exceedingly numerous, existed over the whole surface of the body, except the nose and abdomen. They were bluish-red in color, and mostly of the size of a lentil to a split pea. They were hard and almost painless on pressure. The larger ones were of the size of a haricot bean. The lymphatic glands were swollen, and the liver

and spleen were slightly enlarged. There was no fever, but a feeble appetite and generally defective nutrition. The diagnosis was confirmed by an examination of two tumors which were excised for that purpose. The treatment adopted was subcutaneous injection of Fowler's solution of arsenic, diluted with two parts of distilled water to one of the solution. A dose equivalent to two and a half to four drops of Fowler's solution was injected daily; and between September 12th and December 9th, eight grammes of Fowler's solution had been injected. It had been necessary to occasionally suspend the injections, so that in three months only fifty injections had been made. From December 10th the dose of Fowler's solution was raised gradually to nine drops (diluted always in proportion). The result of the arsenical treatment was the gradual dispersion of the tumors and the diminution of the enlarged lymphatic glands. Pigmented spots existed for some time over the seat of the tumors, and in November (1882) the skin had become pliant and smooth. Only on the legs were there some small papules of lichen pilaris, and a very few similar papules on the arms. All the cicatrices had become pale, and on the limbs in particular a great number had entirely disappeared.

Warts.—In a course of lectures on dermatology, reported in the *Medical News*, Dr. Duhring says that verrucæ, or warts, either hard or soft, consist of variously sized and shaped papillary formations. *Verruca vulgaris*, or common wart, occurs about the hands, especially on the fingers. *Verruca plana*, or flat wart, is found on the back and about the shoulders. *Verruca filiformis*, consisting of a thin thread-like formation, is encountered on the eyelids and neck. *Verruca digitata*, a broad excrescence with finger-like processes springing from the borders, is found upon the scalp. *Verruca acuminata*, also called cauliflower excrescence and venereal wart, is a pinkish, violaceous, or bright-red fleshy vegetation occurring usually about the genitalia of either sex, and often accompanies venereal disease, being caused by purulent secretion or excessive heat and moisture. It may also occur independent of any venereal disease. It takes on various forms, and, as a rule, appears like the head of a cauliflower or a cock's comb. It consists of a proliferation of the epidermis, the development being rapid; the papillæ of the corium and the corium itself are also greatly hypertrophied, and the blood-vessels dilated, rendering the growth exceedingly vascular. The most satisfactory treatment of these growths is excision, and cauterizing their bases. The galvano-caustic ligature, chromic or nitric acid, or acid nitrate of mercury may be used. The oleate of arsenic is also said to act very well. In the treatment of venereal warts astringent lotions together with some dusting powder are highly useful. The writer has employed with satisfaction the method of touching these warts with nitrate of silver and covering with absorbent cotton.

Chronic Intestinal Catarrh.—Professor Nothnagel, at a recent meeting of the Royal and Imperial Society of Physicians at Vienna (*Wiener Med. Blätter*), spoke on the subject of chronic intestinal catarrh, which he said had been but little mentioned in text-books. There is also no explanation given, in physiological manuals, of the fact that healthy individuals have generally only one stool in the twenty-four hours. Nothnagel thinks that no explanation can be given, but that it is one of those arrangements, depending partly on the anatomical relations of the parts, and partly on innervation, for which we cannot account. Chronic intestinal catarrh may be considered to be present when mucus appears in the motions, although the absence of mucus must not be regarded as conclusive evidence against the existence of catarrh. Nothnagel divides the cases of chronic intestinal catarrh into four classes: 1. Those patients who have a stool every second or third day, often produced artificially; this is the type of primary chronic catarrh of the large intestine, and depends, according to Nothnagel, on diminished anatomical activity of the ganglion-cells. 2. Cases where a stool is passed daily, but each time thin, pulpy, and mixed with mucus. 3. Cases with irregularity in the state of the bowels, sometimes constipation, sometimes diarrhœa, and sometimes an alternation between the two; the diminished activity of the nerve-cells explains the constipation, and the irritation of the fæces causes eventually the diarrhœa, which may also be excited by a very small error in diet. 4. Cases with continued diarrhœa. Here, however, chronic ulceration of the bowels must be distinguished from catarrh. Where diarrhœa is present without ulceration of the large intestine, Nothnagel has always found an affection of the small intestine as well. When the food does not undergo its normal changes in the small intestine, it acts as an irritant on the mucous membrane of the colon, and causes the diarrhœa. Some patients have a stool after each meal, some after a mid-day meal only, and some after an evening meal only. Nothnagel would explain this by referring it to nervous influence.

Freckles.—Freckles, or lentigo, may sometimes be made to disappear by an application of citrid acid night and morning. The method employed by dermatologists, and attended with considerable success, is to apply a solution of corrosive sublimate, one to three grains to the ounce of water, or emulsion of almonds night and morning. Dr. Duhring reports the latter as the most satisfactory, and advises its application until a slight amount of desquamation takes place.

Loosening of the Teeth.—Dr. Sewill, *British Medical Journal*, alludes to a disease which appears to be on the increase at the present time, and is characterized by a chronic wasting of the alveoli. The symptoms commence with inflammation of the free edge of the gums and the alveolar periosteum. The gums and alveoli slowly waste until the teeth are lost. The teeth are commonly of good structure and free from caries. There is in many cases deposits of tartar on the denuded surface of the root, and beneath the swollen and loosened margin of the gums. As a rule, several teeth are affected at the same time. The disease commonly shows itself about middle life. It sometimes accompanies diabetes, and also gout, and cases of debility and anæmia. The treatment consists in periodically removing the tartar, and swabbing the necks of the teeth beneath the loosened gums twice a week with pure carbolic acid.

Foreign Bodies in the Bladder.—In the "Mittheilungen aus der Chirurgischen Klinik zu Tübingen" is contained a paper on foreign bodies in the bladder, based on thirteen cases that have been treated in the Tübingen clinic in the course of the last thirty years. The term foreign body is used in a restricted sense, so as to exclude stone and such bodies as are formed within the organism. In by far the most cases the foreign body enters the bladder by the urethra. According to the statistics on this subject published in 1856 by Denucé, of Bordeaux, males and females constitute the subjects of this injury in almost equal numbers. In males, the foreign bodies are most frequently pieces of stalk or straw, wire, lead-pencil, and in females any of the different forms of needle and needle-case. The female patients are for the most part young, while most of the men are advanced in years. In six of the thirteen cases recorded by the author of this paper, the foreign body had passed into the bladder by the urethra. The patients in three cases were males, and aged respectively, forty-five, forty-nine, and fifty-four. Of the three females one was aged sixteen, one twenty-four, and the last twenty-five. A much smaller group is that of cases in which the foreign body consists of a broken and detached piece of some surgical instrument, as, for instance, a catheter, bougie, or sound, a lithotrite, caustic-holder, etc. Catheters of German-silver become very fragile after having been kept long, and ought not then to be used. Of elastic

catheters and bougies, Nélaton's catheter of vulcanized caoutchouc, after it has been kept long unused, becomes extremely fragile, while the ordinary elastic bougies become dangerous only after frequent use and prolonged retention in the bladder. Gutta-percha catheters, it is pointed out, are particularly dangerous. In most of the cases of this group the accident is owing to a fault rather of the patient than of the surgeon, and is the result of too frequent and prolonged use in catheterization of a worn-out instrument. The author's list includes five of such cases. In two instances the foreign body was the end of a metal catheter, and in the other three the end of an elastic catheter. The second way in which foreign bodies may reach the bladder is through a wound in the wall of this organ. The injury in such cases is either a penetrating or a gunshot wound. The penetrating wound through which the foreign body is passed is usually caused by some blunt instrument driven into the bladder from the perineum or anus. The retention of foreign bodies in the bladder occurs much more frequently after gunshot wounds. Of 285 cases of gunshot wound of the bladder collected by Bartels, 81 were complicated by retention of foreign bodies, consisting of portions of the fire-arm, or a fragment of bone, or a small portion of the clothing. Associated with the above injuries are those rare instances of ruptured bladder complicated by fracture of the pelvis, in which one or more loose fragments of bone are driven into the vesical cavity.

The third and least frequent way in which a foreign body can reach the bladder is through a pathological communication between the bladder and neighboring organs. The foreign body in such cases is usually something that has been swallowed, and has ultimately passed into the bladder from the ileum or rectum after adhesion and ulceration of their walls. By perforating ulceration, also, fœtal remains of extra-uterine pregnancy, sequestra from necrosis of the pelvis, and the contents (teeth, hair) of dermoid cysts of the ovary, have penetrated into the bladder. The foreign body is seldom expelled spontaneously by the urethra. Of 391 cases of foreign body in the bladder collected by Denucé, 13 only terminated in this way. In 2 of the 13 Tübingen cases there was a spontaneous discharge. The foreign body in one case was a long piece of metal catheter which had been four weeks in the bladder, in the other a straw. The foreign body, after prolonged detention in the bladder, becomes invariably incrusted with lime-salts, and may form the nucleus of a vesical calculus. Small and round bodies are soon completely incrusted, while long thin bodies are incrusted only in the middle, and are quite free at their ends. If a fragile body, a straw for instance, be broken up in the bladder, each of the fragments may form the nucleus of a distinct stone. The rapidity of the incrustation and the size of any calculus that may be formed depends on the nature of the substance forming the nucleus. Vegetable material becomes rapidly incrusted, and of hard materials silver and gold and glass are less readily incrusted than iron. Beyond this incrustation and formation of stone, the presence of a foreign body in the bladder very seldom gives rise to any special complication. In six only of the many cases collected by Denucé was death due to the direct action of the foreign body on the wall of the bladder. Some few instances have been recorded of the foreign body in the bladder of the female having penetrated into the vagina. The surgeon having assured himself of the presence of a foreign body in the bladder, it becomes very necessary for him, before deciding as to the means of removing it, to make out its size, form, consistence, position, and mobility. This may be done by digital exploration from the rectum, by bimanual examination by the rectum and anterior wall of the abdomen, and by the use of lithotriptic instruments. The endoscope, Dr. Knöller thinks, is not likely to prove of much service in these cases. The last and most difficult problem is the removal of the foreign body in the readiest and least dangerous way. If the body be of small size, and have not been long in the bladder, the surgeon may await for some time the chance of its being passed spontaneously with the urine. To favor this, a large thick bougie may be passed into a distended bladder, and then withdrawn so as to allow the urine to rush out in a full stream. Extraction by the natural passage is indicated when the circumference of the foreign body does not exceed the calibre of the urethra, and when it can be broken up within the bladder. Since the introduction of lithotrity, and with the progressive improvement in the instruments used in this operation, the extraction of the foreign body by lithotomy has been less frequently performed. The statistics of Denucé show that, while before 1830 extraction was performed in 27, and lithotomy in 100, out of 127 cases; since this year, out of 122 cases, extraction was practised in 101 and lithotomy in 21. In dealing with a foreign body in the bladder of a female, Dr. Knöller would advocate forcible dilatation of the urethra, introduction of the finger, and extraction by means of slender forceps. —*London Medical Record*, August 15, 1884.

Treatment of Acute Inflammation of the Knee-Joint.—Dr. Barwell draws attention to a method of treating severe inflammations of joints, and more especially those of the knee. In a sprain or wrench of a previously healthy joint, a severe attack of synovitis follows, with pain and swelling, but if dislocation takes place, no such symptoms follow, for the torn and synovial membrane permits the hypersecretion of the inflamed membrane to drain away, and thus relieve the tension. Acting on this doctrine, the method adopted by the author is as follows: Suppose the knee to be the injured joint, it is to be enveloped in a broad bandage of elastic webbing; or, if that be at the time unattainable, an ordinary calico bandage will answer the purpose, care being taken to leave between two of the turns a little interval on the inner side on a level with the upper margin of the patella. At this point there is passed into the joint a tubular needle, thoroughly cleansed and asepticised. The fluid runs away as a rule easily, and when the flow has ceased the needle is withdrawn, the puncture covered with strapping-plaster, made adherent by spreading on it turpentine (a potent aseptic), and this is to be painted over with collodion. Pressure by means of strapping-plaster must then be applied and the limb placed at rest on a splint for a few days. Dr. Barwell strongly urges that, in all cases, joints which show evident marks of tension should be evacuated in the above manner. Four cases are cited in which puncture was performed, the results being that in a few days the patients were convalescent.—*London Lancet.*

Homœopathy and the Treatment of Dysentery.—Dr. D. A. Baldwin, of Englewood, N. J., writes us concerning the method of treating dysentery with small doses of corrosive sublimate, as recommended again recently by Dr. S. B. Childs, Medical Record, August 23d. He says: "'Hull's Jahr,' for thirty years a leading manual of homœopathic practice, gives, under treatment of dysentery, mercurius bichlo. for painful bloody stools, and colocynth for the griping pains and tenesmus. The editor says: 'A successful procedure in our practice is the alternate administration of colocynth and mercury for many forms of dysentery. Colocynth first, trit., alternate with the mercury, when the griping pains and tenesmus are intense.' Every work of homœopathic practice published since recommends the same." Dr. Baldwin makes the extraordinary charge of "gross plagiarism," based upon the above. The charge, however, will fit better against Jahr. At any rate, mercury in small doses was recommended in Trousseau's "Treatise on Therapeutics," and was used more than thirty years ago by Leclerc.

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THE FINAL REPORT OF THE COLLECTIVE INVESTIGATION COMMITTEE ON ACUTE LOBAR PNEUMONIA.

We have received the second volume of the "Collective Investigation Record," edited by the Collective Investigation Committee of the British Medical Association. It is larger than the first volume, and distinctly superior to it in the value of its contents. These relate to the subjects of acute pneumonia and puerperal pyrexia. The report on pneumonia supplements the preliminary report upon this subject made in the previous volume. At that time the Committee had received only 350 returns, while the present volume contains the analyses of 715 more, making 1,065 cases in all. Of this large number it was found that the returns in fourteen cases only were defective. There was left, then, an unprecedentedly large mass of data upon which to base conclusions. Nevertheless, the committee in their final summing up of results is wisely cautious in estimating the value of the inferences drawn. A good deal of the report has, as is admitted, only a negative value; while many of the points elicited were already known. It could hardly be expected, indeed, that any extraordinary facts should be brought out regarding a disease which has for centuries been tirelessly watched by so many competent investigators.

There are, however, some facts of fundamental importance presented, as well as many minor details of considerable practical interest.

The value of the Committee's report is much enhanced by several original communications upon the subject of the alleged zymotic and infectious nature of pneumonia. Dr. Octavius Sturges presents a concise and lucid historical paper upon epidemics of pneumonia in Great Britain. Dr. Sidney Coupland contributes a still more elaborate article upon foreign epidemics. A report of two epidemics of pneumonia in the Punjab is made by Surgeon-Major S. E. Maunsell, and an original contribution to the subject of the micro-organism of pneumonia is furnished by Mr. George M. Giles.

Taken altogether, the material given in this volume of the "Investigation Record" marks a decided advance in our knowledge of pneumonia, and future clinical writers or lecturers must levy tribute upon its pages.

We present some of the main facts of the report, furnished by the Committee and its individual members.

It is evident that there is an inclination to adopt the conclusion that acute lobar pneumonia is not the simple and single entity which it was once believed to be. Thus Dr. Sturges refers to the various forms of epidemic and contagious pneumonia under three heads, viz.:

1. Epidemic pneumonia, occurring in districts or houses after the manner of epidemic catarrh.

2. Pythogenic pneumonia, occasioned by sewer gas, fecal accumulation, and over-crowding.

3. Infectious pneumonia, imported into a house or district, and spreading from person to person. Dr. Sturges gives a brief review of the cases which have been reported in Great Britain, favoring the view that pneumonia appears under the forms above enumerated. These cases alone are not numerous enough to be of any great value, nor is it pretended that they form more than a link in the chain of evidence. Dr. Coupland reviews the foreign literature covering this same subject, and furnishes a great deal that is more positive. In the same line with these papers are the reports of epidemic pneumonia in the Punjab, and the article by Dr. Giles on the micro-organisms of pneumonia. This latter gentleman has made microscopical examinations and inoculation experiments, which, while not perfectly in harmony with those of Friedlander, do on the whole, he believes, corroborate that observer.

The evidence as to the infectious, and occasionally contagious character of pneumonia, furnished by the returns, supports, though only in a measure, the views discussed by the individual contributors. Out of the 1,065 cases, five observers only speak of epidemics of pneumonia attributable to atmospheric or meteorological conditions similar in character to influenza epidemics. Only three observers speak of "pathogenic cases." Nine independent observers express the opinion that pneumonia is, under certain circumstances, capable of transference from one person to another. Yet these gentlemen make the reservation that, possibly, in their cases it was only a similarity of conditions which caused the apparently contagious attacks. Despite this, as it appears to us, somewhat meagre evidence, the Committee feel warranted in believing that the infectious character of pneumonia in some cases is established, and that it, in very rare instances, is contagious. We reach the conclusion, from a survey of the whole evidence here furnished, that pneumonia may be, and generally is, simply a local inflammation; that in other cases it is a true infectious disease, a pneumonic fever; and that, finally, in rare cases this infectious fever is transmissible from person to person. It is shown further that the local disease, pneumonia, may be primarily excited by exposure to cold, etc.; or it may develop secondarily in the course of infectious fevers, or as the result of some poison or other depressing condition acting upon the vascular or nervous system.

Such are the more striking points suggested in the Investigation Record. But in addition a good many other things were brought out by the analysis of the returns. Thus it was found that pneumonia frequently attacks more than one member of a household at the same time; that when unusually prevalent the mortality is exceptionally low; and that defective house drainage and sewer-gas poisoning may both cause and favor the spread of the disease. It was also shown that alcoholic excess not

only favors the development of pneumonia, but may actually directly cause it; and that fatigue and mental depression rank next to alcohol in making the prognosis unfavorable.

The total mortality among the 1,065 cases was 192, or 1 in 5½. Subtracting from these the 105 alcoholic cases, the 14 cases produced by mental and physical depression, and the 22 infectious cases, and the mortality among the remainder was 108, or 1 in 8.

About one patient out of every ten had suffered from previous attacks of pneumonia, and it seems to the Committee safe to conclude that one attack predisposes to another. The mortality from second attacks is not greater than from first, but the same cannot be said of third attacks.

As regards heredity, there is no evidence that the disease runs in families, or that any other form of lung diseases is met with in excess in the families of those who have suffered from pneumonia.

In double pneumonia the disease runs a longer course, and is more liable to have a gradual termination.

Apex pneumonias were found to be as favorable in duration and mortality as other forms; when occurring in phthisical families they show no tendency to degenerate into phthisis, and phthisical families show no tendency to have apex pneumonias. These conclusions run somewhat counter to the received views on this point.

In another respect, also, the returns are at variance with the usual views, and that is as to the mode of termination of the attacks. Sudden remission is not the rule in pneumonia, and the only law which obtains in this regard is that, when the pneumonic pyrexia has lasted over eight days, its sudden subsidence is improbable. We are inclined to think that many physicians, in recalling their past experiences, will not be surprised at this conclusion of the returns.

As regards treatment, one cannot but feel some disappointment at the indefiniteness and valuelessness of the data given.

At the most we only learn what are the most popular measures among British physicians, without in the least being able to say which are the most effective, or whether any of them do any good. As regards local treatment, among 1,037 there were 287 who used poultices to the chest; 117, counter-irritants; 18, leeches; 2, wet-cupping; 9, cold sponging; 4, wet-pack; 3, warm baths, and 2 vapor baths.

As to internal or general treatment, 134 report having used the "expectant" plan—a rather small percentage for so excellent a method. Ninety-four used the "supporting" and roborant measures, carbonate of ammonia being one of the drugs most relied upon. Indeed, carbonate of ammonia was used by 250, and appears to be more uniformly given by British physicians than any other single remedy, excluding alcohol. In 94 cases antimonials were prescribed. Various expectorants were used in 214 cases, opium in 60, and bromides in 14 cases. Antipyretic drugs are rather in favor. Quinine was found in 143 returns, aconite in 125, digitalis in 65, salicylic acid in 41, veratria in 4. Ergot was given in 9 cases, belladonna in 3, phosphorus in 2, pilocarpin in 1, and colchicum in 1.

Alcohol was used in 424 cases, while in 104 it is expressly stated that no stimulants were used.

It must be confessed that an examination of the returns of treatment leaves one with a poor opinion of the value of British skill in treating pneumonia. Either they are much misrepresented, or the professional practice is to a large extent hap-hazard, and dependent on the peculiar education or bias of the practitioner. It is certainly strange that at this day it is found necessary to use from twenty-five to thirty drugs in pneumonia, besides "antiphlogistic" or "antipyretic" measures.

THE NEW LOCAL ANÆSTHETIC.

When we have heard and seen what the local application of cocaine hydrochlorate has done in abolishing pain, we are in danger of over-reaching the bounds of reasonable enthusiasm regarding its merits as an anæsthetic. Such of the ophthalmologists as have tried the salt cannot speak too highly of its wonderful power. Since the letter of Dr. Noyes appeared in our last issue, the ophthalmic surgeons have been vieing with each other to put the new anæsthetic to the severest test. As to what can actually be accomplished through its agency by the mere instillation of a few drops upon the most sensitive conjunctiva, is perhaps best appreciated by the perusal of the cases reported in the present issue by Drs. Agnew, Moore, and Minor.

So far as used it has been a great success, and there is possibly a future for its more extended application, not only in ophthalmic operations, but in general surgery. But this can only be determined by actual experience. The test for its still wider range of usefulness is yet to be made in ophthalmic practice. If its power to control pain in the operation of iridectomy can be established, the importance of the discovery of this anæsthetic will, in eye surgery at least, rank second only to that of ether itself. On general principles, it is fair to assume that, by increasing the strength of the salt and allowing more time for the manifestation of its effects, operations of the class mentioned may be performed without pain to the patient. At least it appears to us that a fair trial is warrantable on the rational presumptions offered.

It is not reasonable to suppose that, even from the present aspect of the question, we shall stop here. It is quite certain that in those numerous cases in which local anæsthesia is necessary for minor operations in surgery, gynecology, laryngology, otology, and even dentistry, this anæsthetic will be tested. Especially would it seem to be indicated in those parts of the body which are covered by mucous membranes and plentifully supplied with sensitive nerves.

As yet we know little or nothing of its possibly poisonous effects in large doses, and it is to be hoped that no rashness in experimentation will demonstrate them. With this introduction, cocaine takes its place in the line of new remedies, and awaits the verdict of an impartial trial.

THE ORIGIN OF YELLOW FEVER.

The unique, mysterious, and at the same time deadly, character of yellow fever, by which it is separated so markedly from all other fevers, has led to the most zealous investigations of its pathology. Hardly any disease has

called forth so many robustly defended and statistically fortified theories; in fact, yellow fever seems, like spiritualism, to have a tendency to unsettle the mind of the inquirer and turn him into a fanatic over his own special pathogenesis. Yellow fever, unlike other infectious fevers, lives only in certain regions where salt water, vegetable and animal decay, and tropical warmth exist; even these do not furnish all the elements for its sustenance. It exists only in the sea-ports of the tropical Atlantic and Western Mediterranean, from which places it stalks forth in the summer to attack other regions. Since 1647 outbreaks of the disease have occurred, and it has been a terror to all ships trading in the West Indies and Gulf of Mexico. In many of these West Indian ports it has become practically endemic.

Some modern sanitarians have been disposed to treat the subject of the origin of this disease lightly, and to deny the possibility or need of ever knowing how yellow fever came into being. Dr. Chaille, of New Orleans, once compared this inquiry to that of "the origin of a cat," which after all is a very respectable and not entirely hopeless object of research. Most of our more recent writers of text-books evade the question of pathogenesis altogether, or give the vaguest information about it.

If it were entirely accepted now that yellow fever does not rise *de novo*, the question of its origin would indeed have little more than an historical or scientific interest. Thus those who, like Dr. Hargis and Mr. Gamgee in late years, have claimed that the disease arises in ships, cannot deny that the conditions for producing it arise anew each year. The general tendency of opinion, however, is certainly against the ship origin or the *de novo* origin of yellow fever.

In the October number of the *North American Review*, Dr. C. Creighton gives a very interesting and vigorous exposition of another hypothesis, first put forward by Audouard. This hypothesis is that yellow fever arose from the slave-ships which carried on their traffic in the last and the early part of the present century.

The arguments put forth are briefly these: Yellow fever is a disease of tropical sea-ports, but limited only to a few of them. These ports of yellow fever are mostly the old ports of debarkation in the slave trade, its first appearance being at Bridgetown, twenty years after slaves began to be imported. The exacerbations of the fever have, as a rule, corresponded with the most lawless periods of the traffic.

These slave-ships contained hundreds of negroes crowded together in the hold, where they lived in filth and developed unspeakable stenches from the accumulated excretions of their bodies. Cases are related, showing that under these conditions a form of diarrhœa broke out among the negroes, and that then yellow fever broke out among the crew, the negro himself being rarely affected. These slavers having arrived at port with their crew and cargo, discharged the latter and then cleaned out their ships, pumping the bilge-water and the accumulated filth of the voyage into the harbor. This being done for years in the almost tideless harbor of Havana, for example, the bed and shores have become infected with the specific germs, by which the disease is kept endemic and the port a distributing centre. This fatal mud, says Dr. Creighton, has long been washed away from the Delaware, from Charleston, and all other Atlantic ports. It would have disappeared from the Gulf ports but for the sluggishness of the waters. It may long stay in the West Indies as a kind of Nemesis for the horrors and cruelties of the "middle passage."

Audouard's theory, thus revived and eloquently defended by Dr. Creighton, contains much that is plausible.

Certain it is that if the filth, heat, and effluvia generated by human crowding could ever originate a new disease, a specific fever, the old slavers furnished the conditions.

The objections which will be raised are that the theory is too narrow. A single case well substantiated might upset it. The old slavers might well have originated yellow fever, but can we say that they were its only source?

THE COMMA-BACILLUS OF CHOLERA NOSTRAS.

At the meeting of German Naturalists and Physicians at Magdeburg, September 18 to 23, Professor Finkler, of Bonn, made a most important communication regarding the cholera bacillus. He announced that as the result of a series of experiments made by Professor Prior and himself, they had discovered a comma-bacillus in the stools of cholera nostras. They had cultivated this organism on gelatine and other substances, and had studied carefully its life-history. Microscopically it was identical, or nearly so, with Koch's comma-bacillus. In its growth, however, it finally develops spores, and after a time only micrococci are to be seen in place of the bacilli. It is claimed that these spores are the "resting-state" of the bacillus. Cholera stools two weeks old were taken. No bacilli, but only micrococci and other forms were found in them. Cultivations were made, and the comma-bacilli developed.

Specimens of the bacillus of cholera-nostras have been taken to Berlin and shown to Dr. Koch, who acknowledges the similarity of their appearance to the bacilli of Asiatic cholera.

Inoculations of the cultivated bacilli, made by Prior and Finkler in dogs and rabbits, have as yet given no decided results.

Prior is positive that the disease from which he obtained the organisms was cholera nostras.

The significance of the discovery is certainly very great, but we abstain from comment until further particulars reach us.

Dr. Samuel Morgan Valentine, born in New York City, and a resident thereof, died in Lucerne, Switzerland, August 7, 1884, after a short illness, resulting from disease of the heart. He was graduated from the College of Physicians and Surgeons in 1838, and after a thorough course of study in Europe for two years, returned to this country, and engaged actively in practice, till other matters requiring his attention he was obliged to relinquish his professional duties. Though long living a retired life, Dr. Valentine always retained his interest in medicine, was well known to the prominent physicians of the city, and was respected for his sound judgment and his many kindly qualities of character. At the time of his death he was still a member of the New York County Medical Society.

News of the Week.

The Mississippi Valley Medical Association, at its annual meeting, September 23–25th, at Springfield, Ill., elected the following officers: *President*—Dr. F. W. Beard, of Indiana. *Vice-Presidents*—Dr. A. B. Miller, of Missouri; Dr. J. A. Sutcliffe, of Indiana; Dr. E. H. Luckett, of Kentucky. *Secretary*—Dr. G. W. Burton, of Indiana. *Assistant Secretary*—Dr. H. J. B. Wright, of Illinois. *Treasurer*—Dr. A. M. Owen, of Indiana. It was decided to hold the next meeting at Evansville, Ind., on the second Tuesday of June, to continue three days.

The Successor to the Late Professor Cohnheim.—The candidates for the vacant position of Professor of Pathological Anatomy at Leipsic are Rindfleisch, Klebs, Ziegler, and Weigert. Dr. Koch's name has also been mentioned, but we learn by cable that he has declined the proffered chair.

Dr. Alexander H. Stevens.—Dr. A. C. Post writes: "Allow me to correct an error in The Record of October 4th. Alexander H. Stephens was a distinguished politician of Georgia. Alexander H. Stevens was the eminent New York surgeon."

Cremation of Paupers.—It is proposed as a measure of economy to burn the dead paupers of Brooklyn, instead of, as is at present the practice, burying them in two-dollar soap-boxes. However admirable this scheme might be, practical men will see the futility of trying to carry it out, since it would prevent the Brooklyn politicians from making their usual percentage on each coffin.

A Field for Ophthalmology.—Professor Mosely has discovered an animal—a mollusc—which has 11,000 eyes. "If only men and women were thus poly-ocularly endowed," sighs the young ophthalmologist.

A Case of Scarlet Fever in a Canary is reported by Dr. Frank Ogston, of Aberdeen, in the *British Medical Journal*. The bird was in a room where two children lay sick with the same disease. The animal's skin was bright scarlet, its throat apparently sore, and it finally died.

"Vienna" Surgery.—This is the term popularly applied in this city to "bold" surgery, *i.e.*, such as is done for the benefit of the surgeon rather than the patient. We are glad to say that there is not much of it just now.

A Proposed Electro-therapeutical Association.—It is proposed to hold a convention of physicians at Waco, Texas, on October 30th, for the purpose of forming an Electro-therapeutical Association.

Berlin News.—The Berlin correspondent of the *Allgemeiner Wiener Medizinische Zeitung* writes that Prince Bismarck recently asserted in the Reichstag that medicine had made no progress in two thousand years! The same correspondent writes that the week in Berlin has been a very quiet one; Professor Schweninger had received no new decoration.

A Medical President.—Dr. Don Rafael Zaldivar, President of the Republic of San Salvador, is said to be a very accomplished physician. He has just been chosen for a third term, and is now travelling in Europe.

The Harveian Oration was delivered this year on October 18th, by Dr. Russell Reynolds.

The Académie de Médecine, of Paris, held a meeting on September 16th. M. Hervieux made a report upon revaccination. He gave the experiences of Surgeon-Major Burlureau, who in 210 cases had obtained successful vaccinations in 61.43 per cent. M. Hervieux, among 312 cases, had had 66.33 per cent. of success. The Academy then passed to the subject of the treatment of cholera.

Ten Thousand Dollars for Prizes.—The sum of 40,000 francs has been left to the Faculté de Médecine, Paris, to found a biennial prize in hygiene. The sum of 10,000 francs has been left for a prize in histology.

The Change of View.—"Nearly forty years ago," says Dr. R. W. Matthewson in the Proceedings of the Connecticut Medical Society, "I had the honor to report the name of Fordyce Barker, a member of this Society, for Dissertator. His subject was 'Local Treatment of Uterine Diseases by the Speculum.' This was considered such an innovation on old customs that many of his friends feared it would injure his professional character. When Dr. Bedford, of New York, first opened his clinics, his exposure of females was severely denounced by some of the medical journals."

Midwives in Detroit.—Says the *Detroit Lancet*: "Since the training school for nurses has opened with a liberal endowment, at Harper Hospital, in Detroit, the nurses, including some of the best of the midwives, have organized themselves into a society, by which they propose to emulate the attainments of the graduates of the nursing school. They have procured regular instruction from members of the medical profession proficient in the art and science of midwifery. They are said to be quite particular as to those whom they admit to membership."

The Autopsy upon Cohnheim.—There is a certain grim satire in the careful accounts of the post-mortem appearances of the great pathologist Cohnheim. Dr. Huber, who made the autopsy, reports: Contracted gouty kidneys, the right being the smaller and both containing calculi, arterio-sclerosis; extreme excentric hypertrophy of both ventricles; brown induration of both lungs, on the left side hydrothorax, on the right pleuritis; infarction necrosis in the left kidney.

The Minnesota College Hospital has had its mortgage foreclosed and it is financially defunct. The city of Minneapolis is not large enough to support the institution. The college connected with it, however, continues its work.

Another Free Medical College.—The Medical Department of the University of Colorado, at Boulder, has begun its sessions. Tuition is free, and $6,200 have been appropriated to build a hospital.

Another Tri-State Society.—A movement was set on foot at the recent meeting of the Medical Society of Virginia to organize a Tri-State Medical Society, representing the States of Virginia, West Virginia, and North Carolina.

The Chicago Medical Society announces that there is now a collection of twelve hundred standard medical works in the Public Library.

A Slander on the Texans.—Our esteemed but fiery contemporary, *The Texas Courier-Record*, devotes two or more pages of editorial incandescence to the wilting and extinguishment of a Philadelphia professor who asserted that it was "a common practice in Texas for the mothers to chew the food for the children, regurgitate and spit it out, and then feed it to them." The editor of the *Courier-Record* affirms this to be a disgusting and infamous slander. He further expresses a deep desire to get hold of the author of the slander and apply a coat of tar and feathers in a manner that would strain the most liberal interpretation that could be put upon the Code of Ethics. The real facts seem to be that there is a practice existing in several Southern States on the part of mothers of softening a bit of cracker or biscuit in the mouth, then giving it to the baby. The starch in the cracker is turned to sugar by the saliva and the infant's food partly digested. This procedure is, therefore, claimed to be physiological and rational.

COCAINE HYDROCHLORATE THE NEW LOCAL ANÆSTHETIC.

[The reports of the following cases, illustrating the surprising effects of cocaine hydrochlorate as a local anæsthetic in ophthalmic operations, come to us just as we go to press. The results are certainly very encouraging, and will doubtless command the attention they deserve. —Ed.]

By Professor C. R. AGNEW, M.D.,

NEW YORK.

In your last issue is a letter from our distinguished colleague, Dr. H. D. Noyes, in which there is an allusion to the new local anæsthetic, hydrochlorate of cocaine, as recently discovered and applied in Germany. We have to-day (October 14, 1884) used the agent in our clinic at the College of Physicians and Surgeons, with most astonishing and satisfactory results. If its further use should prove to be equally satisfactory, we will be in possession of an agent for the prevention of suffering in ophthalmic operations of inestimable value.

It is difficult to avoid expressions of extreme enthusiasm in view of what we have to-day seen and in view of what we may rationally expect from the further applications of the agent. The following cases, however, will be of more value than any abstract disquisition.

Case I.—A. E——, aged five; a case of convergent squint. A two per cent. solution of the hydrochlorate of cocaine was dropped upon the surface of each eye three times at intervals during a period of fifteen minutes, without any more irritation of the eyes than would have been caused by drops of common water. At the end of twenty-five minutes he walked into the operating-theatre, laid down upon the operating-chair, and allowed the spring speculum to be inserted between his eyelids, the scleral conjunctiva to be seized with fixation forceps and cut with scissors, and the rectus internus of the left eye to be divided without complaining or showing any signs of suffering. When we had the internus tendon upon the strabismus hook, he said we were pulling something.

Case II.—L. H. B——, aged eleven; convergent squint. Solution applied as above, three times in fifteen minutes, at the end of which time he sat erect in a chair, resting his head upon the breast of an assistant, had the speculum inserted, scleral conjunctiva seized with fixation forceps, and the internal rectus divided in the usual manner, and when asked said the operation had given no pain.

Case III.—Joseph McC——, aged six; convergent squint. Solution applied as above. In the delays of the clinic somewhat more than half an hour elapsed between the last instillation of the agent and the attempt to operate The youngster seemed to be much frightened by the presence of the surgeon and students; would not submit to the proposed strabotomy, and ether had to be administered before it could be done. As his scleral conjunctiva was insensible to the contact of the fixation forceps fifteen minutes after the first instillation of the solution, it is a fair inference that the anæsthetic benumbing had passed away before he entered the operating-theatre. His nervous apprehension was so great that he would not have endured an operation even though there might have been no real pain inflicted.

Case IV.—James McG——, aged fifty-two, was sent to the clinic with the statement that he had a lacerated wound of his left eyeball involving the sclerotic. His dread of handling and of light was so great that we could get no view of the injured organ, as every attempt to inspect it was instantly followed by blepharo-spasm. A few drops of the solution were instilled, and in a few moments the patient walked into the operating-theatre with the injured eye open and so free from irritability as to make an examination of it before the students quite easy.

Case V.—J——, a physician, aged seventy-one, with double cataract, consulted us on October 15th. His eyes were extremely sensitive to touch. A drop of the two per cent. solution was dropped upon the scleral conjunctiva, and in two minutes and a half the patient permitted me to apply the end of a forefinger to the scleral conjunctiva without wincing.

The solution used in all these cases was a two per cent. one, made with distilled water and with Merk's crystals of the hydrochlorate of cocaine.

It is only by extensive gathering of the clinical facts in regard to this new agent that we can reach just conclusions as to its value, and it is important that all observers should give the profession the benefit of their experience The operations at the clinic alluded to above were done with the assistance of Dr. David Webster, Dr. W. Oliver Moore, Dr. Neil J. Hepburn, and Dr. W. A. Pierrepont, and in the presence of the class.

By WILLIAM OLIVER MOORE, M.D.,

PROFESSOR OF EYE AND EAR DISEASES, NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.

Cocaine has been known since 1855, and is the active principle of the leaves of the Erythroxylon coca, a South American plant, the leaves of which resemble very much those of the tea plant. Many of the natives during hard work use these leaves, chewing them with some alkaline substance, going without food the entire day, but taking their food at night. It has long been known as a powerful stimulant. Cocaine hydrochlorate is of more recent origin, and the anæsthetic effect of it when brushed or dropped upon mucous surfaces has been only known about a year, it having been used in Germany first by the laryngologists, to produce anæsthesia of the vocal cords and surrounding parts to facilitate manipulation. In this journal, page 417, in a letter from Dr. H. D. Noyes, of New York, an account is given of an experiment made with this drug before the Ophthalmological Congress at Heidelberg, where a solution of the cocaine hydrochlorate was dropped into the eye, the result being complete anæsthesia of the conjunctiva and cornea. Dr. Noyes is justly enthusiastic on the subject, and his letter caused me to obtain some of the drug for experimentation, the results being annexed.

A two per cent. aqueous solution of the cocaine hydrochlorate (Merk's) is procured and dropped into the eye, two drops being sufficient at first; the eye is then closed, and in five minutes two more are instilled; after five minutes more have elapsed, as a rule, anæsthesia is complete; if not, two more drops may be used. There is no pain attending the application.

The following experiments were made with very satisfactory results:

CASE I.—Chinaman, with keratitis. Two drops of a two per cent. solution of the cocaine hydrochlorate were dropped into the left eye, then closed; after five minutes two more drops were used; at the end of fifteen minutes from the first instillation I was able to grab the ocular conjunctiva with fixation forceps and move the eye in any direction without pain or any disagreeable sensation. The ulcer of the cornea was also touched and gently scraped without sensation. In the right eye, where none of the drug had been used, the patient made loud demonstrations of complaint on my attempt to use the fixation forceps, as in the first instance; in short, there was a marked difference in the eyes. The anæsthetic effect in the right eye had entirely disappeared in thirty-two minutes from the beginning of the experiment.

CASE II.—Man, aged thirty-seven, with double pterygium. In one eye, the left, I put in two drops of the solution, and after waiting five minutes introduced between the lids two drops more; after another interval of five minutes two more were used.

Five minutes after the last drops were used the operation was begun, the pterygium being excised by scissors, the conjunctiva being freely cut, and the cut surfaces brought together by three sutures. This usually painful operation was done with the utmost ease, and without any painful sensation, the patient being surprised at its completion.

In the other eye the cocaine was not used, and the pain and suffering of the patient was, as usual, when ether is not used. The effect was very marked, and really very surprising. The anæsthesia lasted twenty-five minutes.

CASE III.—Child, seven years old, having squint (strabismus convergens). Two drops of the solution were put into the squinting eye, and repeated as in the other cases till six drops in all had been used during the space of fifteen minutes; at the end of which time the conjunctiva was sufficiently quiet to allow of the tenotomy of the internal rectus muscle, the usual operation being performed, the spring speculum being used. The little boy made no complaint of pain, and simply said the speculum stretched the lids, but was painless. That it is unusual for a child of this age to allow an operation of this sort to be done without ether is at least a marvel, and to show that the patient, though young, had not "pure grit" the other eye (the one in which no cocaine had been used) was tried, and found to have the normal sensations.

I have tried it in other cases, yet this will suffice to bring it before the notice of the profession at once. Several of my confrères at the New York Eye and Ear Infirmary and elsewhere have used the same solution with good effect. Much more will be written on this subject, as it has a wide application, and we have yet to learn much of the properties of the alkaloid. The introducer of this new and truly magical preparation is a student in Vienna, Dr. Koller, *vide* Dr. Noyes' letter above referred to. I hope to say more of its practical value at another time.

BY JAMES L. MINOR, M.D.,

ASSISTANT SURGEON, NEW YORK EYE AND EAR INFIRMARY.

The last number of THE RECORD contained a short account of the proceedings of the Heidelberg Ophthalmological Congress, by Dr. H. D. Noyes. He speaks of the anæsthetic effects of the muriate of cocaine, and of its probable future in ophthalmology.

I have had an opportunity of using the drug on several cases, and with such beneficial effect, that I deem it important enough to lay before the readers of THE RECORD.

I used a two per cent. solution, kindly furnished me by Dr. Moore, after the manner described by Dr. Noyes—viz.: two drops were dropped into the conjunctival sac, and in ten minutes this was repeated, and the operation was performed ten minutes later.

CASE I.—A nervous boy, aged ten, upon whom I had operated for squint in the left eye three days before, presented himself on October 13th, with the conjunctival stitches still *in situ*. The solution of cocaine was instilled as above described. The cornea and the conjunctiva could be brushed with the end of the finger, without causing any uncomfortable sensation. The speculum was introduced, the stitches removed, the conjunctiva was grasped with fixation forceps, and the globe was pulled around by them. The child complained of no pain, and when asked after it was over if he had been hurt, he replied in the negative. The other eye retained its sensibility, and it could not be handled in the least.

CASE II.—A woman, aged fifty, upon whom I had performed a preliminary iridectomy a few weeks before, came for the extraction of the cataract on October 13th. She was nervous and very resentful of anything disagreeable or painful. When the iridectomy was performed, I attempted to do it without an anæsthetic, but found it utterly impossible to even retain the speculum between the lids, and resorted to ether. I decided to use the cocaine, and dropped it in the eye, on which she shrank back and closed the eye as tight as possible—resenting even this much handling of the eye—for the solution is non-irritating to the conjunctiva. The second application was made without difficulty, and I could rub my finger over the conjunctiva and cornea without causing discomfort. The speculum was introduced, the conjunctiva was grasped with fixation forceps, and the globe thus pulled in position. A large section of the cornea was made, and cystotomy and delivery of the lens were easily accomplished. The patient complained of no pain, and after the operation, and on the following day, declared that she had not been hurt in the least. She was even surprised when told that the operation had been performed. Immediately after the operation I tested the sensibility of the conjunctiva of the other eye, by lightly touching it with my finger. She shrank and closed the eye so quickly and violently that I feared the other eye would suffer from the violent contraction of the lids. The case has progressed, so far, as satisfactorily as could be desired.

Should cocaine in the hands of others meet with the same success that I have attained, it will mark an era in ophthalmology unsurpassed by any in modern times. Its use in other branches of medicine and surgery may be almost as important as in ophthalmology.

233 MADISON AVENUE, NEW YORK, October 15, 1884.

AMERICAN PUBLIC HEALTH ASSOCIATION.

Twelfth Annual Session, held at St. Louis, Mo., October 14, 15, 16, and 17, 1884.

(By Telegraph to THE MEDICAL RECORD.)

TUESDAY, OCTOBER 14TH—FIRST DAY.

THE session was called to order at 10 A.M. Dr. Albert C. Ghion, presiding. About one hundred and fifty members were present.

DR. J. SPIEGELHALTER, of the Local Committee, welcomed the members and announced the programme for the session.

An appointed committee recommended that members residing in the District of Columbia form into a body and secure incorporation of the Association. Adopted.

DR. J. ZERRIEN LINDSLEY, the Treasurer, reported a balance on hand with an admission of one hundred and twenty-five new members.

The Committee on Necrology reported, showing fourteen deaths.

The Conference of Charities and Corrections at present in session was invited to attend the meetings of the Association.

Dr. Charles W. Chancellor, of Maryland, read a paper on

TENEMENT REFORM,

dealing with the squalid dwellings of the poor, their unsanitary condition, and vice resulting therefrom.

Major Samuel I. Robinson, of the District of Columbia, read a paper on

THE HYGIENE OF THE HABITATIONS OF THE POOR,

abounding with practical suggestions regarding drainage, ventilation, etc.

Dr. William K. Newton, of New Jersey, read a paper on

THE SANITARY SURVEY OF A HOUSE,

urging that a sanitary history of all houses should be kept by municipalities.

The above papers were discussed by Dr. Hunt, of New Jersey; Erastus Brooks, of New York; Dr. Reade, of Ohio; Dr. Fee, of Kansas City; Dr. A. N. Bell, of New York; Dr. Raymond, of Brooklyn; Dr. Briggs, of St. Louis; Dr. Devron, of New Orleans; Dr. Bryce, of Toronto; Dr. Cook, of Nashville.

Mr. Brooks introduced the question of

LICENSING PLUMBERS,

instancing the good results following in New York.

Dr. George H. Rohé read a paper on

THE HYGIENE OF OCCUPATIONS,

giving statistics of average life expectation of the various trades and professions.

Dr. Adolph Alt, of Missouri, read a paper on

PROTECTIVE SPECTACLES FOR WORKINGMEN,

recommending that employers be made to force men in their employ to wear protective spectacles wherever there is danger from flying chips.

Prof. Charles O. Curtman, of St. Louis, read a paper on

HEATING AND VENTILATION.

The hot air principle is considered the best for public buildings.

Dr. W. Thornton Parker, of the U. S. Army, read a paper on

SANITARY MANAGEMENT OF RAILWAY CARS AND STATIONS.

He dealt with the danger of moving sick and convalescents in ordinary cars, and urged sanitary inspection of all trains and adoption of hospital cars.

The Association then adjourned.

Evening Session.

At 8 P.M. the hall was crowded with visitors, many ladies being present.

ADDRESSES OF WELCOME

were made by the Mayor of the city, Governor of the State, President of the State Board of Health, and others. A band of music enlivened the occasion.

The feature of the evening was the address by the President, Dr. A. L. Gihon, which was listened to closely, and frequently applauded.

October 15th—Second Day.

Papers were read on

SCHOOL HYGIENE

as follows: "Report of Committee on Compulsory Vaccination," by Dr. Geo. H. Homan, of St. Louis; "Hygiene of Eyesight of School Children," by Dr. Stephen O. Richey, of Washington, D. C.; "Sanitary Survey of the School-houses of Indiana," by Dr. E. S. Elder, of Indianapolis; "School Hygiene," by Dr. Felix Formento, of New Orleans, La.

THE FOOD QUESTION

was discussed under the following heads: "Cotton-Seed Oil as Food," by Prof. C. E. Munroe, of Annapolis, Md.; "Poisonous Cheese, Canned Beef, Sausage, etc.," by Prof. V. C. Vaughn, of Michigan; "Milk Supply of Large Cities," by Dr. Cheston Morris, of Philadelphia, Pa.

Afternoon Session.

On invitation, Dr. J. V. McCormack, of Kentucky, read a report adopted by the Conference of States Board of Health relating to

THE BEST MEANS OF PREVENTING THE APPEARANCE OF CHOLERA IN THIS COUNTRY.

The report of the Conference stated that there were three essential factors to the prevalence of cholera: 1, The importation of the disease by means of ships; 2, local unsanitary conditions; 3, persons sick with the disease, or things infected by such sick persons. In view of the threatened introduction of cholera into this country during the coming year, it was the sense of the committee that the Government should maintain a national health service, which should establish an effective system of quarantine by the appointment of medical officers at foreign infected ports; that emigrants shall be prevented from landing until the danger of the introduction of cholera has been ascertained. The inspection and quarantine service inaugurated by the National Board of Health met with the approval of the committee, which recommended that Congress be urged to appropriate $500,000 to be used for the purpose of stamping out the disease should it become epidemic.

The committee was of the opinion that State Sanitary Inspectors should be appointed to visit all towns and cities especially liable to the disease to consult with the local authorities as to the best methods of prevention. This work should be vigorously prosecuted before the disease reached the American shores. The report also recommended the isolation of victims of the disease, and the destruction of their clothing and the discharges from their bodies.

The Association unanimously endorsed the report of the States Board of Health Conference, and a motion was adopted that said report be printed and copies of it sent to the United States Cabinet officers, Members of Congress, and all State and local Boards of Health of this county and Canada.

A motion by Dr. Hibberd, of Indiana, to appoint a committee to report on antiseptics and germicides, was referred to the Executive Committee. The rest of the session was devoted to reports from the various States on the progress of sanitation during the past year.

THE PAPERS READ AT THE EVENING SESSION.

An audience of one hundred and fifty was present, including quite a number of ladies. Papers were read as follows: "The Food we Eat and the Adulterations to which we Submit," by Hon. Erastus Brooks, of New York; "The Hygiene of Sailors engaged in the Coasting Trade," by Dr. Walter Wyman, U. S. Marine Hospital Service; "Cremation as a Safeguard against Epidemics," by Rev. John D. Bengles, Chaplain U. S. Navy; "The Ultimate Sanitation by Fire," by Hon. J. M. Keating, of Memphis, Tenn. These papers were discussed and the Society adjourned at 11 P.M.

HOW THE MEETING IS ATTENDED.

The attendance of members is quite large, but little local interest is manifested in the proceedings. Toward the end of the afternoon session there were not more than twenty members left in the hall, and these would have been left in the dark if a non-member had not taken upon himself the duty neglected by the local Committee of Arrangements. The papers, as a rule, are carefully prepared and of practical value, but the discussions are spiritless. The usual social entertainments and courtesies are not neglected.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, September 24, 1884.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

SARCOMA OF THE MEDIASTINUM AND LUNG.

DR. VAN GIESON presented a specimen accompanied by the following history, and for both he was indebted to Dr. W. F. French, House Physician at St. Catharine's Hospital, Brooklyn, N. Y.: D. N——, forty-one years of age, married, German, was admitted September 11, 1884. On examination the chest revealed the following physical signs: over the upper lobe of the right lung there was entire absence of respiratory movement, absence of vocal fremitus, complete dulness, and absence of respiratory sounds, unaltered by change of position. The patient was emaciated, and had œdema of the left upper eyelid and orbital region. There was no œdema of the extremities. There was tympanites, dyspnœa, cough without expectoration, nausea without vomiting. The left side of the thorax was normal. There was no family history of cancer. There were no symptoms referable to the uterus. The patient died September 16, 1884. The autopsy was made on the 17th. Body emaciated, and rigor mortis only slight. Head and uterus not examined. The heart was normal; the pericardium contained eight onnces of clear serum. Lungs: Outside of the pericardium, in the anterior mediastinum, there was a mass of infiltrated glands, about the size of the fist. In the anterior portion of the upper lobe of the right lung was a dense infiltration in the form of filbert-shaped nodules of a white color, and bound together with a fibrous stroma. The growth was regarded as cancerous. The remaining portion of the right lung, with the exception of a few adhesions at the base, was apparently healthy. The left lung was apparently normal. The bronchial glands were involved. The right bronchus was constricted to the size of a No. 8 English urethral sound. The spleen and kidneys were normal, and the liver was slightly fatty.

Dr. Van Gieson remarked that the fact that the uterus was not examined might give rise to doubt as to whether or not the patient might not have had cancer of that organ; there was nothing in the clinical history, however, which turned the attention of the house staff in that direction.

Microscopical examination, so far as it had been made, determined the growth in the thorax to be sarcoma rather than cancer.

The absence of vocal fremitus was a feature of interest in the clinical history, and it could be accounted for by the constriction of the bronchus. In another case seen with him by Dr. Janeway in consultation, the same condition of absence of vocal fremitus was noticed, and that fact aided somewhat in the diagnosis.

THE PRESIDENT remarked that the new growth probably began in the mediastinum.

DR. VAN GIESON said that was the opinion of the gentlemen who made the microscopical examination.

THE PRESIDENT asked if the bones were examined.

DR. VAN GIESON thought they were not. There was no evidence, however, of disease of either the sternum or the ribs.

THE PRESIDENT regarded sarcoma of either the lungs or the mediastinum as quite rare, independent of the previous existence of the disease in some other part of the body, especially the bones.

DR. VAN GIESON remarked that in a somewhat similar case œdema of the eye without protrusion was noticeable, and there was no evidence of new growth in the cellular tissue of the orbit. In that case the œdema was accounted for on the ground of pressure upon the blood-vessels of the neck.

ACUTE PHAGEDENIC PUSTULAR SYPHILIDE.

DR. JOHN A. WYETH presented a patient with the following history: Samuel J——, bookkeeper, German, thirty-five years of age. Was admitted to Mt. Sinai Hospital July 11, 1884. Previous to the present attack he had had illicit intercourse frequently, had had gonorrhœa many times, the last attack being nine months ago. He had had no urinary trouble at any time. Five weeks and a half ago the patient had sexual intercourse with a prostitute, and about one week later he saw a small blister one-fourth of an inch in diameter at the base of his penis. This blister remained of apparently the same size for the next ten days, when he again had sexual intercourse, and a few days after the last exposure, the sore upon the base of the penis began to enlarge and became painful, and it had been steadily extending up to the time of admission to the hospital. The sore has been painful, and during the week prior to admission prevented sleep. He had had a bubo on the right side, that had been painted with iodine which reduced its size somewhat, and rendered it less painful than it was at first. The sore upon the penis had been treated with iodoform and charcoal poultices.

The patient's general health has been good, no cough, feet never swollen, no rheumatism. On admission, there was found a large non-suppurating bubo in the right groin, and a sore with indurated edges at the base of the penis on the right side. The sore was triangular in shape with the apex extending up the penis, one angle at the base running into the scrotum, and the other into the groin. The sore measured about one inch on each side, and was deeply excavated, measuring more than an inch in depth, and it had a sloughy base.

A papular and pustular eruption was scattered thickly over the face, trunk, and extremities. The inguinal, epitrochlear, and cervical glands were enlarged. There had been a small ulceration upon the dorsum of the tongue, which lasted about two days.

The patient's general condition was good; his bowels were regular; there was no urinary trouble; his tongue was coated; his mouth dark red; and his temperature 102.2° F.

July 15th.—The cavity of the sore was swabbed out with deliquesced chloride of zinc, and packed with iodoform gauze.

July 23d.—There was still some phagedena at the angles of the sore, which was touched with chloride of zinc 1 to 4, and dressed with iodoform.

July 31st.—The eruption had gradually increased in size, and now many of the pustules measure three-fourths of an inch in diameter, and are covered with scabs raised half an inch in circumference, domed and black, and surrounded by a reddish areola.

August 7th.—Ulcer now level with the surface and looks well. The patient takes protiodide of mercury gr. j. t.i.d.

August 8th.—Ordered inunctions, ung. hydrarg., 3 ss. every night.

September 4th.—Scabs have nearly all fallen, leaving ulcers which are rapidly healing.

Dr. Wyeth remarked that the case had shown phagedena to a degree he had not seen before with an acute syphilide. There was no evidence of tertiary lesion. He regarded the case as one of acute phagedenic pustular syphilide, and maintained that it illustrated the statement of Bumstead and Taylor that a pustular syphilitic eruption is apt to follow a phagedenic syphilitic ulcer on the penis, and the violence is frequently proportionate to the violence of the initial lesion.

A point of interest in the treatment was the fact that very large doses protiodide of mercury were given daily for three or four weeks before the sores began to heal, and no unpleasant constitutional effects belonging to the drug were produced.

DR. VAN GIESON asked if self-inoculation was ruled out entirely.

Dr. Wyeth replied that it was not absolutely, although he was unable from the clinical history to ascertain its existence.

Dr. Van Gieson had seen a similar case, in which there was a mixed sore, because there was a history of two intercourses. He regarded it as extremely difficult to draw the border line in cases of that kind.

Dr. Wyeth had recognized the difficulties attending a complete diagnosis, and had also been convinced, the more he studied the disease, of the great variety of the manifestations of syphilis.

Dr. Levi referred to what Mr. Jonathan Hutchinson had called syphilitic lupus, and had seen three cases, of which he had been reminded by the case presented by Dr. Wyeth. He further remarked that in Vienna syphilis was diagnosticated by the disease attacking the root of the nose, while lupus attacks the apex of the nose.

Dr. Wyeth remarked that in his case the disease attacked not only the nose at the apex, but other portions of the body, and was seen upon the forehead, etc. He regarded the lesion upon the apex of the nose as due to strangulation of the vessels.

Dr. Levi remarked that he did not doubt the correctness of the diagnosis in Dr. Wyeth's case, and merely mentioned the point made by Mr. Hutchinson that syphilis was one of the causes of lupus, of which he had seen cases which had a striking resemblance to the one presented.

Dr. Van Gieson asked if, when the initial lesion was pure chancre, extensive destruction of tissues at the seat of the lesion was to be expected in ordinary cases?

Dr. Wyeth said no: that true chancre was not apt to be ulcerative, but there are forms which are chancroid in type.

Dr. Van Gieson referred to one case of syphilis under his care, which resisted all forms of treatment. The case was also treated by Dr. Bumstead, but without effect, and he (Dr. Bumstead) regarded it as one of the cases in which the poisoning is so profound that it could not be reached by ordinary remedies. The beginning of the case was very much like that of the one presented by Dr. Wyeth. The initial lesion was upon one labium, which sloughed away entirely and very rapidly, and before the disease could be arrested the opposite labium was involved and also completely destroyed. The secondary symptoms were of the most obstinate character, were followed by iritis and the later eruptions, despite the most active mercurial treatment. The rodent variety, therefore, might be seen early in the history of a case.

Dr. Wyeth thought that such cases were not so rare as they might appear to be. Some cases of syphilis resist all forms of treatment and go on to a fatal termination without abatement of the disease. In other cases the patients live for years without the recurrence of symptoms, after having been under treatment. He regarded syphilis as a curable disease and not a difficult disease to cure. At all events he preferred to take his risks with syphilis rather than typhoid fever or pneumonia. He also believed that thousands of cases of syphilis had recovered without medicine which produced any direct effect upon the poison of the disease.

Dr. Van Gieson remarked that the point to which he wished to make special reference was the early appearance of the phagedena. He had had a patient under observation who was treated for syphilis *ten* years ago, and it was supposed that he was cured, but at present he was suffering from paralysis of the abducens believed to be of syphilitic origin, *without having contracted the disease a second time.*

Dr. Seguin remarked that nerve phenomena of a syphilitic character might develop as long as twenty-five years after the disappearance of all symptoms of the first attack, and this also in cases in which the primary syphilitic attack was mild.

The President referred to 9 cases in which syphilitic lesions developed twenty years after the primary attack, and the patients had been reasonably well treated at first.

Dr. Wyeth remarked that in many cases syphilis remained dormant in the system for twenty or thirty years, and then tertiary symptoms developed,

Dr. Levi remarked that the fact that the initial lesion in Dr. Wyeth's case was pustular made him believe that the general system of the patient was affected by something besides syphilis. With regard to treatment, whenever mercury had failed to control the disease, it had frequently occurred that to stop all specific remedies and resort to hygienic measures with cod-liver oil and iron was the very best method of treatment which could be adopted.

The President had often adopted this plan, and had even begun the use of cod-liver oil, iron, etc., before administering mercurials.

The Society then went into executive session.

Correspondence.

OUR PARIS LETTER.

(From our Own Correspondent.)

THE PROPOSED AMBULANCE SYSTEM IN PARIS AND DR. NACHTEL—THE REPORT OF THE CHOLERA EPIDEMIC.

Paris, September 26, 1884.

The readers of The Record may recollect that so far back as the year 1880 Dr. Nachtel submitted a proposal to the Academy of Medicine and to the Municipal Council of Paris for the introduction of ambulance carriages to meet the requirements of this populous city in case of street accidents, as at present nothing of the kind exists. He even offered his services gratuitously to assist in the organization of a system similar to what has been so long in operation in New York, and which has rendered such signal service. Dr. Nachtel's plans were highly approved of and accepted in principle, but, however incredible it may seem, nothing has as yet been decided upon. There has been no lack of perseverance on the part of Dr. Nachtel, for he has been unremitting in his endeavors, and he has not left a stone unturned to have his scheme carried out. He has paid personal visits to officials whom he thought in a position to help him in the matter, from the Prefect of Police to the President of the Republic, by whom he was received with the usual French politeness, but the affair is not a whit more advanced than it was four years ago. Finding little hope from official quarters, Dr. Nachtel has, from time to time, appealed to the public through the medical and lay press, but without any better result. He has now published a pamphlet in which he has taken the pains to recall the different phases through which the subject has passed since 1880, and to reproduce the various documents he has officially submitted to the Academy of Medicine, to the Council of Hygiene, and to the Municipal Council of Paris, and once more makes an appeal to all whom it may concern (and surely it concerns everybody residing in this city or only passing through) to have Dr. Nachtel's scheme realized without further delay, as street accidents are as rife as ever and the existing arrangements are quite inadequate to meet them. The following statistical report just published by the Prefect of Police will show the necessity for having ambulance carriages at the disposal of the population. The report relates to accidents in Paris and in the suburbs during the year 1883. The total number of accidents during the year was 759. Of this number there were 208 cases of wounds of the head and 192 cases of drowning; there were 212 cases of wounds produced by various causes, 59 cases of illness of various kinds, and 31 cases of epilepsy; 182 persons received medical aid in the eight pavilions established along the banks of the Seine and of the canals in Paris for succoring the drowned.

To give strength to his cause, Dr. Nachtel has even

secured the support of Victor Hugo, whose voice he thought, from his high standing in the favor of the nation, would attract some notice. The idea was as far-fetched as it was a happy one, as Victor Hugo is not only a great poet but he is also a great philanthrophist, and in the latter capacity he expressed himself as follows: "New York has commenced, Paris will continue that which you propose, and which is suggested by reason and by evidence. The success of the scheme will confirm your affirmations; it is clear, it is definite, it is humane. I approve of it and congratulate you." The above is a translation of Victor Hugo's autograph letter to Dr. Nachtel, which has been reproduced in the pamphlet above referred to, but I am afraid the French will pay no more heed to it than they would to any of the great poet's poetical effusions.

The French are a peculiar people, they are quick in some things and deplorably slow in others. And one of the things they are slow in is the adoption of any innovation coming from a foreigner. Moreover, they are so tied down by red-tapeism that, even in the management of their internal affairs, when a proposition is made by one of their own for the public good, the course it has to go through before it is sanctioned or pronounced upon is so interminable and attended with such vexatious processes that in many cases the proposition is either forgotten or hopelessly abandoned. In this assertion I am supported by an editorial in a recent number of the *Progrès Médical*, in which the writer, with reference to this very question of ambulance carriages as proposed by Dr. Nachtel, states: "Unfortunately everything is done very slowly in France, and practical questions are long since resolved by our friends, the Anglo-Saxons, before they are even broached by us. In spite of our superficial love for novelty, we are, at the bottom, great followers of routine, and we bear with astonishing patience all the defects of an administration for which Europe has never envied us." I have translated the original paragraph as literally as possible, in order that I may not be accused of undue exaggeration, although it is hardly necessary to offer any apology, as what is stated above is a proverbial fact. I consider it highly discreditable to the country, the inhabitants of which assume to be in the van of progress and civilization, to be so exclusive and so adverse to foreign intervention, even when it affects their nearest interests, for while the scheme above referred to is long since in operation in London and in many other manufacturing towns in England and Scotland, Paris is still without its ambulance service.

I may here recall another instance of French repugnance to foreign innovations. It so happens that Dr. Nachtel is here again the instigator. I refer to the necessity of adopting some system to prevent people being run over by cabs and other vehicles moving about the city of Paris. More than a year ago the subject was brought to the notice of the Prefect of Police and a plan was submitted to that functionary for carrying out this very desirable and philanthropic object, but nothing has been heard of it since. The consequence is people are still being run over and the victims are left to the tender mercies of the public, as no particular arrangements are made for attending to them. It is true that refuges in the streets have been multiplied, but they are few and far between and are often not to be found where they are most required. The plan suggested was that adopted in London and New York, but I have it on good authority that the Paris policemen have received no particular orders to interfere with the vehicles going to and fro, or to render assistance to pedestrians in the streets unless they were moved to do so by their own sense of courtesy or humanity.

Dr. Proust, Inspector-General of the Sanitary Services in France, has just sent in his official report to the Minister of Commerce on the state of the cholera epidemic. The report was published in the *Journal Officiel* in which he states that the epidemic is evidently on the decline, thanks to the energetic measures that have been taken to ensure salubrity in the dwellings, as well as in the streets. The progress of the present epidemic in France and Italy demonstrates once more the futility and even the danger of "cordons sanitaires" and the necessity for the rigorous application of hygienic measures.

OUR LONDON LETTER.

(From our Special Correspondent.)

BUYING PRACTICES — MEDICAL AGENTS — BACILLI AND THEIR DISCOVERIES—THE ADVANCE IN ANTISEPTICS—THE ANTI-VACCINATION CRAZE.

LONDON, September 29, 1884.

THE holiday season is now fairly over, and so is the fine weather. Most practitioners are now reassuming harness for the winter. Among general practitioners many are now departing to fresh localities, having sold their practices and either purchased new ones or gone elsewhere to start. Practices are changing hands at all seasons of the year, but the summer and autumn perhaps witness more changes than the other seasons do. The most usual mode of commencing general practice is—among those possessed of sufficient capital to do so—to purchase one. The prices given vary a good deal with the class of practice acquired, but many fairly good-class general practices can be bought for a sum equal to the total receipts for twelve or eighteen months. The incomer has, of course, to support himself during the first year until his first bills have been paid. In good-class practices little ready money is taken. Medical agents are accustomed to gauge the character of a practice by the amount of ready money taken, *i.e.*, the more ready money taken the lower is usually the class of practice. Christmas bills, too, are often not paid until February or March. The purchaser of a practice has usually to take the lease of the house where the latter is leasehold, and is often required to purchase the furniture at a valuation. During the period of introduction he has to divide the returns with his predecessor. Bearing all this in mind it will be seen that to purchase a practice of eight hundred pounds a year requires a capital of nearly two thousand pounds.

Partnerships are much more expensive than ordinary practices, as the income is more certain and is sometimes guaranteed. Two years' purchase is a minimum price, and often much more is asked. Practices in fashionable resorts fetch more than ordinary practices. Consulting practices are rarely to be purchased, but occasionally such is the case. I have known several instances of special practices changing hands, and for very large sums. The practice of a general physician or surgeon is very rarely to be obtained thus though, and still more rarely kept if purchased, being so largely personal.

Most transfers of practices take place through medical agents, who charge a commission to venders, but none to purchasers or those seeking information. Many medical agents are either medical men themselves or related to medical men. From the number of them in London it would appear to be a good business. I have often been surprised to see so few practices advertised for sale in American medical journals. The agents' advertisements often occupy six or eight pages of our medical weekly journals. *The Lancet*, perhaps, has the largest number of this class of advertisements, being the oldest medical paper, but the other journals now have a fair share.

The bacillar origin of cholera still attracts a large share of attention. I do not think the profession here though are yet at all inclined to accept unquestioningly Koch's views on the comma-bacillus and its significance. Bacilli have been rather overdone of late years, and so many paragraphs have appeared in the journals attributing this disease and the other disease to bacilli, that sound physicians are getting rather incredulous as to some of the discoveries made by means of immersion ob-

jectives. It is not many years since Professor Klein had to recant some apparent discoveries he had made, and acknowledge that the appearances he had described were in reality due to the method of preparation and the reagents employed. I must give him credit for honestly acknowledging his error.

There can be no doubt that recent studies on micro-organisms and their relation to disease have immensely stimulated the use of antiseptics, and this, too, among many who by no means give in their allegiance to the germ theories. Carbolized vaseline has to a large extent replaced the time-honored lard in obstetric practice, and carbolic lotion is largely used in out-patient practice, even by surgeons who would never think of using the spray, and many of whom never performed operations antiseptically.

The anti-vaccination movement at Leicester is assuming serious proportions. Leicester has long been a centre of the agitation against vaccination, and for many years returned to Parliament a gentleman of very pronounced anti-vaccination views—Mr. Peter Taylor. Leicester is by no means an average town in this respect. In most parts of Great Britain there is practically no great difficulty in getting the vaccination acts carried out. It is very common for the mothers of infants about to be vaccinated to express an objection to it, on the score of the pain inflicted, and even to say they should not have their children done if they were not obliged to by law, but most of them are quite ready to acknowledge the desirability of having it done, even while expressing a sentimental objection to it. The rigid opposition of the fervid anti-vaccinationist is of a very different type. Fortunately such are not very numerous in ordinary English towns. They form a very small minority of the population, and a decreasing one. Most Englishmen have a good deal of reverence for law, and I believe the anti-vaccination movement would long since have died out but for a few fanatics who fanned the flame of discontent. I must say that when a batch of anti-vaccinationists are committed to prison for obstinate refusal to comply with the law, their voluntary martyrdom excites a good deal of sympathy even among those who differ from them in opinion, and probably does more than any amount of agitation to advance their cause among the populace at large. There is also an increasing feeling against fining the same parents over and over again. "Liberty of the subject" has always been a popular cry in England.

"DEAD TEETH IN THE JAWS."

To the Editor of The Medical Record.

Sir: In the editorial of this date, entitled "Dead Teeth in the Jaws," your suggestions as to the desirability of medical men being "better informed concerning diseases of the jaws and mouth," strike a dentist as quite *à propos;* for the public good, physicians should be better able to discriminate between "numerous harmful dental appliances" and modes of practice and the legitimate conservative treatment of diseased teeth, which is based on accurate knowledge of the anatomy and physiology of the maxillary tissues and their appendages. You do not overestimate the importance of instruction in oral surgery in the medical schools. But while the medical profession is happily beginning to realize the importance of teeth, as factors in nervous and nutritional disturbances, they should not lose sight of the value of teeth, nor of the possibilities of treatment.

"Dead teeth," so called, are not in an appreciable degree deprived of periosteal nourishment by the death of the pulp, which occupies the central canal of the root, and maintains the vitality of the dentine; the peripheral tissue of the root—cementum, histologically analogous to bone—may still be nourished in a practically normal condition by the periosteum through a lifetime, provided the latter tissue is not permitted to suffer from irritation, which is liable to be produced by the mephitic products of putrefaction of the dead pulp tissue, escaping through the apical foramen of the root. Inflammation and abscess as well as the more obscure reflex phenomena, when associated with pulpless teeth, almost invariably have the apical foramen and the periosteum about it for a starting-point; to render this point and the root-canal aseptic and preserve them in that condition by thoroughly filling the canal with impervious material, which shall prevent the entrance through the foramen of tissue fluids which would in turn become an irritant, is the aim of all intelligent treatment; and when performed with the skill and thoroughness demanded, these operations rarely fail to place the root in a perfectly benign condition. Want of knowledge, skill, or conscience on the part of dentists, unfortunately, causes too many of these operations to be harmful and often disastrous; but when the medical profession have given the attention to this subject that its importance demands, it will be able to do much more toward correcting the evil. Dr. Sexton has rendered a notable service to the profession, and to humanity, in making known the results of his careful observations of diseased teeth which, through neglect or "ill-advised dentistry," have become the cause of serious aural disturbances.

It is to be hoped that his valuable contribution and the editorial on the subject will further stimulate interest in this subject. J. Morgan Howe, M.D.S., M.D.

New York, October 4, 1884.

To the Editor of The Medical Record.

Sir: Lately Dr. Sexton has given to the profession a number of articles describing the relation between dental and aural troubles. These articles were interesting and conclusive; but the last article, in The Record of October 4th, includes a series of cases, the results of which, in several instances, are not at all conclusive. Although Dr. Sexton is to be congratulated in bringing forward this new line of thought, it must not be forgotten that this conjunction of neuralgiæ is exceedingly rare.

That poor people have bad teeth and much wax in the ears is the rule and not the exception; the teeth are allowed to decay from inability to pay a dentist; and the ears are not cleaned through inadvertency. This conjuncture of circumstances may frequently obtain without there being a connected correlation of symptoms in the two organs.

Dr. Sexton did not state, for the benefit of his readers, that it is only the middle, constricted, portion of the auditory canal that secretes cerumen nominally; the third, innermost, portion of the tube secretes cerumen only under pathological conditions; this might aid in the diagnosis.

Regarding Dr. Sexton's remarks on the prevailing practice of treating teeth, instead of extraction, we think these remarks are too sweeping, and thereby calculated to mislead a great many medical practitioners who have paid no attention to dentistry, or have even endeavored to acquire a theoretical knowledge of the dental organs. There is a good deal of imperfect work turned out by both classes of dentists, the cheaper and the more expensive ones; even extraction is often clumsily and imperfectly done; but all this, which is to be deplored, does not negative the fact that, with the exception of certain conditions (well known and rapidly diagnosed by the practised hand), it is far preferable to leave the teeth in the jaw, having the carious portion removed, than to cap, fill, build, or crown. There are several objections to extraction; the chief one, not generally appreciated, is that the corresponding tooth in the other jaw has now no opposing tooth for the purpose of mastication.

Dr. Sexton's remark on wearing dental plates is apposite; besides the danger of swallowing the teeth, or plate even (in some instances having caused instant

death), the pressure of the plate causes absorption of the palatal membrane and exfoliation of the palatine process of the superior maxillary bone in some cases; where mercury is used in preparing the cheap, rubber plates, there is danger of salivation, with possibly detrimental local results.

Dr. Sexton's remarks, that dentists leave dead teeth in, which should be extracted, are apt to lead the inexperienced practitioner to recommend a wholesale extraction of carious teeth, to the great detriment of the individual. It is an undoubted fact that dentistry has made great strides, thereby greatly benefiting the public. It is now no longer necessary to kill a nerve before filling, neither is it necessary to retain the nerve, as life and nutrition can be carried on through the peridental membrane, microscopy demonstrating the continuity of vessels through that membrane into the superfices of the fangs; lastly, bridging and crowning do away with plates.

Respectfully,

C. E. Nelson, M.D.

New York.

To the Editor of The Medical Record.

Sir: In The Medical Record of October 4, 1884, appeared an editorial upon "Dead Teeth in the Jaws," in which the practice of retaining dead or diseased teeth in the mouth is condemned. Reference is also made to the "Clinical Notes on Aural Diseases," to be found in another part of the same number of The Record, and in which Dr. Sexton is reported as also condemning the practice and charging dentists with doing more harm than good by their methods of treatment. He says: "Since dentistry has become such a popular business, and dead and diseased teeth have been so carefully retained in the jaws through their influence, especially among the better-to-do, nervous diseases about the head are becoming alarmingly common. The very general custom of wearing false teeth in the mouth attached to vulcanite, rubber, celluloid, and other plates is also an evil of vast proportions. Indeed, I sometimes think that the evil done through ill-advised dentistry is greater than the possible good arising from the work of the more capable dentists."

These are very sweeping statements, and I am sure that upon a more careful investigation they cannot be substantiated by facts. The question to determine is, What is ill-advised dentistry? In the minds of some medical men, it would seem to be the attempt at restoring dead (pulseless) or diseased teeth to a healthy condition, and that extraction of such teeth was the only safe practice. Now, against such teaching I raise an earnest protest. The cases in which trouble arises from the retention of dead and diseased teeth which have been treated by the average dentist, or from the wearing of artificial teeth, must be very small indeed in proportion to the number treated or wearing such appliances. The cause lies more in the neglect of dental treatment than in the result of it, as evidenced by Dr. Sexton's own cases. That much harm is done by ignorant dentists—and they are not a few—there is abundant proof; but that this harm outweighs the good done by the better class of dentists—who are also not a few—certainly cannot be possible. Few specialists succeed better in the treatment of disease than the better class of dentists, and it is their duty to remove an offending tooth when necessary; but their highest duty is to save it if possible.

The extraction of a tooth simply because it is pulpless, the cause of an abscess, badly decayed, encrusted with tartar, the seat of pericemental inflammation, or pyorrhœa alveolaris, etc., would be a sin against good practice; for all such conditions are in a majority of cases amenable to treatment, and should no more be sacrificed on account of their condition than that an eye should be enucleated because it was affected with conjunctivitis or ulceration of the cornea, or that a bone should be resected because at one point it was affected with caries or necrosis, or a leg or arm amputated because it was the seat of some disease which had occasionally resisted intelligent treatment. The duty of the ophthalmologist, of the surgeon, and of the dentist alike is to save the organs upon which they operate, and not to sacrifice them. The latter procedure would be many times less troublesome to the operator and the shortest way out of the difficulty for the patient; but it would not be based upon sound surgical principles, it would not be common sense, nor would it be right.

To the minds of many people the teeth are of but little consequence, and I am sorry to say their value is not properly appreciated by many physicians, if one may judge from the advice often given to their patients, viz., "If a tooth troubles you, have it extracted;" and with equal propriety they might say, if your eye troubles you, have it taken out—but no surgeon would be justified in doing it, save as the last resort.

That there is great need of a higher educational standard among dentists is freely admitted. In fact, it has been the firm conviction for years of many in the profession that the dental surgeon should be regularly educated in medicine before taking up the study of his specialty; that he should go through the same course of preliminary training insisted upon by the specialist in other branches of medicine; and that the purely mechanical part of dentistry (the making of artificial teeth) as now practised should be divorced from it and relegated to the artisan, thus giving the dentist opportunity to devote his entire time to the study and practice of the scientific department of his calling. It is also a fact that there is great need that medical men should be better educated in the pathology and treatment of dental and oral diseases, for the great majority are lamentably deficient in knowledge upon these subjects.

To this lack of knowledge may be attributed the unsound advice often given in relation to the diseases of the teeth and oral cavity, as well as very many of the failures to diagnose the cause of certain apparently obscure diseases of the eye and ear and neuralgias of the face and head, while, had the dental surgeon received the proper training in this direction, he would have been able many times to determine whether or not it was located in an offending tooth or caused by some other oral disease.

The formation in the American Medical Association of a Section on Dental and Oral Surgery four years ago, and the more recent establishment of instruction in oral surgery in some of the medical colleges, are expressions by the representative medical men of our country of the value and need of better instruction upon these topics, and an effort to supply it.

It is to be hoped that the movement will receive the encouragement it deserves.

I am very truly yours,

John S. Marshall, M.D.

242 Wabash Avenue, Chicago, Ill.

TUBAL PREGNANCY.

To the Editor of The Medical Record.

Sir: Dr. Mundé finishes his article on his case of extra-uterine pregnancy, in the issue for September 27 of this journal, with some considerations as to what becomes of the incysted ovum after the fœtus has been killed by electricity. As a contribution to the answer to this question I would state that I had the opportunity to examine the patient upon whom I had performed this operation in 1882 (see "Transactions of the American Gynecological Society," vol. vii., p. 185) two years later. She had grown considerably stouter, and had never become pregnant. She enjoyed perfect health, and the only thing she complained of was that she had no venereal orgasm during intercourse, although her husband is a healthy young man and nothing abnormal with regard to

the act could be discovered in him. In spite of the increased amount of fat in the abdominal wall, the pelvic organs could be distinctly felt by bimanual palpation. The uterus was found anteflexed as at the time of the operation, but placed in the median line, and there was no trace left of the tumor in the right Fallopian tube.

Yours truly,

H. J. GARRIGUES, M.D.

168 WEST TWENTY-THIRD STREET, NEW YORK.

THE REASON WHY ST. LUKE'S HOSPITAL DOES NOT FURNISH MEDICAL HISTORIES TO OUTSIDE APPLICANTS.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: My attention has been called to a communication in your issue of this date, from Dr. Joseph P. Fessenden, of Salem, Mass. It contains my correspondence with that gentleman, in which, on behalf of this hospital, I declined to give information concerning the disease with which a recent patient suffered while under our care.

In your editorial note on the same, you say that "it is difficult to understand upon what grounds any public hospital can refuse to give to a medical gentleman such information as was solicited," and you courteously request some explanation on this point from the hospital authorities.

The answer to your question involves the important point as to the rights of patients who enter our hospitals for treatment.

Dr. Fessenden's position, as I understand it, is that the confidential communications which our patients make to our doctors concerning their own diseases and the causes which led to them, and our physicians' diagnosis and method of treatment (which are all matters of record in the Medical History Books of the hospital), should in all cases be at the disposal of any physician who asks for them, as a guide to his own subsequent treatment. This position, I hold, cannot be maintained.

In cases of litigation, the attempt has not infrequently been made to obtain from this hospital voluntary information concerning the private character and diseases of either present or former patients, for the purpose of aiding some prosecuting attorney. Such information has uniformly been denied, on the ground that the communications of our patients to our doctors are confidential, are made for purposes of intelligent treatment by our doctors of their individual case, and are not public property. So frequently were such requests made that in 1881 I requested the Counsellor of the Corporation to define clearly my duty in the premises, and received from him the following: "In a litigation where a patient of the hospital is a party, I do not think it would be right for the hospital to disclose to the opposite party, from its books, or through its physicians, facts relating to such patient learned through the connection of such patient with the hospital, unless such disclosure be required by process of court under the ordinary rules of evidence relating to such matters. There might, however, be an exception to this rule in a criminal matter, when the information was requested officially by the District Attorney."

This has established the following rule for the administration of this hospital: that when there is any reasonable ground to question whether the information sought would or could in any way be used to the disadvantage of the patient, it is to be studiously withheld, unless our hospital records are called regularly into court as evidence, when we are obliged to testify to "the truth, the whole truth, and nothing but the truth."

The facts in regard to the case referred to by Dr. Fessenden are that on September 9th I received a letter from a stranger in Salem, Mass., asking, among other things, "the cause of Mr. B——'s being in the hospital." I replied, stating the fact that Mr. B—— had been a patient here, and giving the date of his entry (March 4th) and his discharge (April 14th) as "cured," but declining to disclose the disease from which he suffered, and giving the reasons why such communications could not be made. On September 16th I received a letter from Mr. B——'s brother in Boston, making similar inquiries, and asking if I thought his brother's "brains were all right," that "he talked and acted very strangely." A similar reply was sent. Again, on September 20th, I received a letter from a Dr. Fessenden, who was unknown to me, in which he says: "Mr. B—— is now with his sister in Salem, having suddenly appeared after an absence of six years, physically much emaciated, almost in rags, and mentally unsound besides. I would like to know what was the matter with him while at St. Luke's, and whether he was in sound condition when he left."

Judging from all the circumstances of the case, I could not doubt that Mr. B—— had proven an unwelcome guest on his return to Salem, that it was the desire of his family to send him to a lunatic asylum, and that the physician who had already concluded that his patient was "mentally unsound" sought corroborative evidence from this hospital. This, in justice to our former patient, I felt I must decline to give. My conclusion as to the reasons which prompted the inquiry are reinforced by my published letter to Dr. Fessenden, in which is stated, at least inferentially, my willingness to communicate the facts to Mr. B—— himself, or at his request to his physician.

Yours respectfully,

GEORGE S. BAKER,
Pastor and Superintendent.

ST. LUKE'S HOSPITAL, NEW YORK, October 11, 1884.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from October 5 to October 11, 1884.

CLEMENTS, B. A., Major and Surgeon. In addition to present duties, to take charge of the office of the Medical Director of the Department during the temporary absence of that officer. S. O. 195, par. 1, Department of the Missouri, September 29, 1884.

HAPPERSETT, JOHN C. G., Major and Surgeon. Will be relieved from duty in Department of the East and ordered for duty at Willet's Point, N. Y. S. O. 235, A. G. O., October 7, 1884.

WOODRUFF, EZRA, Captain and Assistant Surgeon. Granted leave of absence for four months. S. O. 235, A. G. O., October 7, 1884.

CRONKHITE, HENRY M., Captain and Assistant Surgeon. Assigned to duty as Post Surgeon, Fort Reno, Indian Territory. S. O. 197, Department of the Missouri, October 2, 1884.

LORING, LEONARD Y., Captain and Assistant Surgeon. From Department of the East to Department of California. S. O. 237, A. G. O., October 9, 1884.

HARVEY, PHILIP F., Captain and Assistant Surgeon. From Department of Dakota to duty in Attending Surgeon's Office, Washington, D. C., relieving Robert W. Shufeldt, Captain and Assistant Surgeon, who, on being relieved, will report to Commanding General Department of the Missouri for duty. S. O. 237, A. G. O., October 9, 1884.

POWELL, J. L., Captain and Assistant Surgeon. Granted leave of absence for one month on surgeon's certificate of disability. S. O. 204, Headquarters Department of the East, October 8, 1884.

SPENCER, WM. G., Captain and Assistant Surgeon. Granted leave of absence for one month. S. O. 204, Headquarters Department of the East, October 8, 1884.

McCREERY, GEO., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Meade, D. T. S. O. 115, Headquarters Department of Dakota, October 6, 1884.

TAYLOR, A. W., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Omaha, Neb. S. O. 87, par. 3, Headquarters Department of the Platte, October 3, 1884.

BLACK, C. S., First Lieutenant and Assistant Surgeon. Granted leave of absence for fifteen days, to take effect this date. S. O. 131, par. 3, Department of Texas, September 29, 1884.

Official List of Changes of Stations and Duties of Medical Officers of the U. S. Marine Hospital Service, July 1 to September 30, 1884.

BAILHACHE, P. H., Surgeon. To proceed to Delaware Breakwater Quarantine Station as inspector, September 10, 1884, to investigate reported pollution of Potomac River water-supply, September 20, 1884.

MILLER T. W., Surgeon. Granted leave of absence for fourteen days, July 10, 1884. Detailed as President Board of Examiners, September 2, 1884.

WYMAN, WALTER, Surgeon. Detailed as Member Board of Examiners, September 2, 1884.

LONG, W. H., Surgeon. Granted leave of absence for twenty days, July 30, 1884.

PURRIANCE, GEORGE, Surgeon. Detailed as Recorder Board of Examiners, September 2, 1884.

STONER, G. W., Passed Assistant Surgeon. To proceed to Lewes, Del. (Delaware Breakwater), as inspector, July 25, 1884. To act as Quarantine Officer at Delaware Breakwater, July 31, 1884.

FISHER, J. C., Passed Assistant Surgeon. Granted leave of absence for thirty days, August 21, 1884.

GOLDSBOROUGH, C. B., Passed Assistant Surgeon. Granted leave of absence for thirty days, July 12, 1884. Leave of absence extended thirty days on surgeon's certificate of disability, August 11, 1884. Leave of absence extended thirty days without pay, September 11, 1884.

HEATH, W. H., Passed Assistant Surgeon. Granted leave of absence for thirty days, September 8, 1884.

GUITÉRAS, JOHN, Passed Assistant Surgeon. Granted leave of absence for thirty days, September 24, 1884.

BANKS, C. E., Passed Assistant Surgeon. Granted leave of absence for thirty days, August 27, 1884.

BENNETT, P. H., Assistant Surgeon. To proceed to Buffalo, N. Y., for temporary duty, September 19, 1884.

GLENNAN A. H., Assistant Surgeon. To proceed to Mobile, Ala., for temporary duty, July 7, 1884.

FISHER, J. C., Passed Assistant Surgeon. Resignation accepted by the Secretary of the Treasury, to take effect September 30, 1884. August 21, 1884.

THE PAY OF THE MEDICAL DEPARTMENT DURING THE REVOLUTION is given by a writer in the *Magazine of American History* as follows: "To the office of Director of the Military Hospitals was attached the pay of $150 per month, two rations, one for servant, and two of forage; to that of the chief physician and surgeon of the army, $140 per month, two horses and wagon, and two rations of forage; to each of the three chief physicians and surgeons of the hospitals, $140 per month and two rations; to the purveyor, $130, and his assistant, $75 per month; to the apothecary, $130 per month, and his two assistants, $50 per month each; to the fifteen hospital physicians and surgeons, $120 per month each, and to each of the twenty-six mates, $50 per month."

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending October 11, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
October 4, 1884	1	60	32	2	22	39	0	0
October 11, 1884	0	49	36	3	26	36	1	0
Deaths.								
October 4, 1884	0	13	0	2	5	19	0	0
October 11, 1884	1	13	5	3	6	21	0	0

INFLUENCE OF SYPHILIS AND MERCURY ON CHOLERA.—M. Martineau has investigated the influence of syphilis and mercurial preparations on cholera. His inquiries lead him to believe that syphilitic patients under mercurial treatment are not exempt from cholera. In 1849 and 1865 the wards of the Lourcine Hospital were full, and the mortality from cholera was excessive there. M. Dujardin-Beaumetz says that syphilis has a fatal influence on typhoid fever. The patients from the Lourcine and Midi Hospitals seized with typhoid fever are sent to the Cochin Hospital, where it is the prevalent opinion that syphilitic patients attacked with typhoid fever have received their death-warrant.

PEPTONIZED MILK.—In reply to the questions raised by Dr. N. E. Oliver in a previous issue of THE MEDICAL RECORD concerning peptonized milk, a correspondent writes that there is no necessity for the use of the *soda* in peptonizing milk. If two portions of milk be prepared —one with soda and the other without—no difference can be seen in the action of the pancreatic ferments, and they will both be digested in the same time. The pancreatic ferments act upon all food substances without the need or use of "alkali." In digesting milk it is necessary to check the action at the desired stage. It was originally proposed by Dr. Roberts to do this by bringing the heat to the boiling point, thus killing the ferment. But if peptonized milk is boiled at any period short of the complete conversion of the caseine into peptone, it is coagulated. This coagulation is due to the peculiar substance into which caseine is changed in the process of its conversion into peptone. The addition of soda bicarbonate was found to prevent this reaction, so that digestion may be checked by boiling at any stage of the digestion, when soda is used. The writer proposes the chilling of the milk by ice to check the digestion and maintain at any desired point, still preserving, however, the *vitality* of the digestive agent. Is the soda objectionable? is it in "excess?" The milk-curdling ferment acts upon alkaline milk (up to 15 grains of soda to the pint) just the same as upon pure milk, but not so quickly. Woman's milk is alkaline. The stomach has two resources for the coagulation of milk—the acid and the milk-curdling ferment. Therefore the soda as used can hardly be considered excessive. There is no doubt but that the coagulation of the milk in the stomach places the digestion of the albuminoids of milk upon the same footing as other albuminoids. So it would seem a self-evident proposition that in order to render cow's milk a fair daily food for the average infant, as a substitute for its mother's milk, it should first be made to quantitatively approximate thereto, and then the caseine adequately altered. When this is done the milk *does curd* in the stomach, or by the addition of acid, precisely as does human milk—namely, in minute flocculi. In cases of disease of the digestive tract,

how far it is proper to pre-digest the caseine, and how long to continue the exhibition of thoroughly pre-digested milk, is a question not within the province of the writer. In order to use the milk at night, the peptonizing agent can be put into a bottle with half a pint of cold water, half a pint of cold milk, and four tablespoonfuls of market cream. Shake, and place on ice at once. There will be no digestive action in this situation. When needed, pour out just enough for a feeding into a tin cup and hold over a brisk flame for six minutes, stirring constantly with a spoon and tasting often so that it does not become too hot to be sipped. Now pour into a nursing-bottle and it is ready for the child. When ice cannot be conveniently had, put four tablespoonfuls of cold water into a tin cup and the proper proportion of peptonizing powder. Mix well and add four tablespoonfuls of cold milk and one of cream, and hold over a flame for six minutes, stirring constantly and tasting so that it does not become too hot to be sipped.

What Quacks Can Do.—Dr. D. B. Smiley, of Middletown, N. Y., writes that two "eclectic" physicians in that town recently undertook to deliver a parturient woman, and did the work in fifteen minutes. The head was seized with the forceps, a towel wound round the neck, and both the quacks gave a long pull together. Result: the head was pulled off! The body was then turned and delivered. The result was that the vagina and perineum were torn to shreds, and the patient died next day. An inquest was called, and the two quacks testified that, though the urine had not been passed for twenty-four hours, they had not thought it advisable to draw the water. One of them stated that the woman's temperature, as taken with his finger, was 93° or 94°. This one stated that the normal healthy temperature was 76° or 80°, but might be 140°. He stated that he meant blood-heat, not the pulse. The other was not altogether clear, but believed 70° to 80° to be about fair, and that it was higher in our Southern States. He used instruments; an instrument for the purpose was called a barometer. The cause of death was given in the death certificate as "uterine paralysis." The coroner's jury returned a verdict that the death was caused "from childbirth, superinduced by over-protracted labor and a want of proper care anterior thereto, and that, in some respects, there was had unskilful practice upon the part of the attendant physicians in the case." The physician who gets such surprising results with a barometer registers as having a diploma from the Eclectic Medical Society of New York, October 17, 1877. It would be interesting to learn on what kind of an examination that Society grants its diplomas, and whether the barometer is in general use among eclectics, and under what circumstances they decide that a patient has fever; also, whether they are proud of their graduates.

Gastric Hysteria.—Dr. G. Frank Lydston, of Chicago, Ill., sends an account of a curious case. We fear that his diagnosis will be disputed, especially in view of the death of the patient. Hysterical vomiting or gastric hysteria would more likely cover the case.

"Annie K——, sixteen years of age, living at home with her relatives, who were in rather moderate circumstances. The young lady had always been perfectly healthy up to the age of thirteen, when she began to have periodical attacks of epistaxis, attended by severe pain in the lower part of the pelvis and back. These attacks occurred at intervals of about three weeks. Eight weeks before I first saw the case, she had one of her usual attacks, but in addition was affected by severe and uncontrollable vomiting. She was seen by several physicians, most of them, I believe, being of the homœopathic persuasion. A number of diagnoses had been made, the most prominent being gastric ulcer, cancer of the womb, and ulceration of the womb. It appeared upon inquiry that an elder sister of the patient had died from a similar sickness, the nature of which had never been determined. On examination I found the patient considerably emaciated (no aliment had been retained by the stomach for eight weeks, and rectal alimentation evidently had not been thought of) and very restless from nervous exhaustion. On examining the ejecta, I found them to contain a considerable quantity of bile, but no blood. There was no pain in the epigastric or intrascapular regions, but a great deal of pain in the limbs and head was complained of. The temperature was normal. Very slight tenderness over the lower part of the abdomen, which was probably exaggerated by the extremely nervous condition of the patient. On examining the uterus, I found it to be very small, particularly as regards the body of the organ. There was no neoplasm or other morbid condition. The ovaries could be felt very indistinctly. I accordingly made the diagnosis of reflex uterine vomiting, dependent upon non-development of the uterus and ovaries. On the third day after my first visit, I succeeded in checking the vomiting, I having meanwhile attempted to support the patient by nutrient enemata. After the vomiting stopped, koumiss and small quantities of brandy were retained by the stomach. At my last visit on the evening of the third day, restlessness and nervous irritability seemed to be increasing, although the pulse was stronger and less frequent. Shortly after I left the house, however, the patient requested her friends to leave the room for a while as she wished to sleep. Accordingly she was left alone for about five minutes, and when her friends returned they found her dead. At the autopsy, which was readily obtained, the stomach and other abdominal viscera were found to be perfectly normal. The uterus and ovaries were rudimentary, the former measuring about one and a half inch in length, and the latter being about the dimensions of good-sized beans. The sexual organs were otherwise normal, with the exception of a peculiar ring of dilated capillaries surrounding the os uteri externum. This was of a bright red color, which persisted in the specimen until placed in preservative fluid."

The Hemorrhoid Quack.—Dr. B. N. Stevens, of Chillicothe, Mo., writes: "We have a class of 'quacks' in this part of the country that advertise to cure hemorrhoids without pain, and that they meet with more or less success is proved by their patronage. You cannot get a patient here to submit to the knife or ligature. They say they will go to the man who can cure them without pain, and whose treatment does not require them to be laid up. Now, of course, they use injections. Will you give your experience with them, the *modus operandi*, etc. ?" We can only say to this that Dr. Stevens will find full descriptions of the carbolic acid treatment of piles in recent works on surgery or diseases of the rectum. The treatment is often efficient, but not entirely free from danger.

Not Extra-Uterine Pregnancy but a Dermoid Cyst.—Dr. Leonard D. White, of Uxbridge, Mass., writes: "In your paper of August 23, 1884, I noticed a short article from the pen of G. C. Park, of Murraysville, Pa., and headed 'Extra-Uterine Pregnancy,' etc. Judging from the description alone, I wish to ask if the tumor under consideration might not more properly be classed under the head of 'Dermoid Cyst.'" Dr. Park in a subsequent note admits that the diagnosis of dermoid cyst is probably the correct one.

The Florida Climate.—Dr. H. A. Canfield, of Gillmore, Pa., writes that his experience regarding the value of the Florida climate has been more in accord with that of Florida physicians than that of Dr. Boyland. Dr. Canfield and Dr. Boyland, from the latter of whom we have received a letter dated September 17th, agree in urging the plan suggested by Dr. Lancaster, of securing an investigation of the Florida climate by a committee of the American Medical Association.

The Medical Record

A Weekly Journal of Medicine and Surgery

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Original Articles.

CONTRIBUTIONS TO

THE ANATOMY OF THE LEMNISCUS.

WITH REMARKS ON CENTRIPETAL CONDUCTING TRACTS IN THE BRAIN.

BY E. C. SPITZKA, M.D.,

PROFESSOR OF NEURO-ANATOMY AND PHYSIOLOGY IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL.

(Continued from page 427.)

III.

In the carnivora the relations of the pes and the lemniscus are much more intimate, owing to the lesser development of the ganglion of Soemmering and the non-intervention of transverse pons fibres. In a set of transverse sections from the brain of a lioness, it can

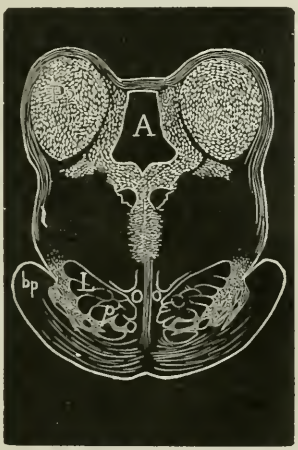

FIG. 13.—Transverse Section through Posterior Pair of Corpora Quadrigemina and Anterior Part of Pons of a Lion. A, aqueduct; P2, ganglion post-optici; *l*, lemniscus portion to same; L, main part of lemniscus; *p*, pes fibres; *bp*, *pontis-brachium*.

be clearly seen how the middle lemniscus area (L, Fig. 13), which is all along separated by a molecular interval from the lateral division (*l*) that goes to the post-optic lobes (P2), constitutes a united bundle with the pes. They are not separated even by a connective-tissue septum, and while confirmatory sagittal sections have not been made, it seems from the comparative area, that the lemniscus portion enters into some union with the substantia nigra and with the subjacent part of the pes. Aside from this connection, the bundle from the pes to the lemniscus (pedal part of the (intermediate) interolivary stratum), represented by the O-like areas on both sides of the raphe, is a well-marked feature of the lion's brain.

In the cat there is a connective-tissue intercalation between the pes and the lemniscus, and it is difficult to decide from tranverse sections whether the main division of the lemniscus is in part absorbed by the ganglion of Soemmering, or lies dorsad of it or in the pes. Certainly there is no correspondingly well-marked field as that represented in L, of Fig. 14 (a section from the human mesencephalon); although in lower levels the lemniscus is quite as distinct, though not as large as in man and the apes.

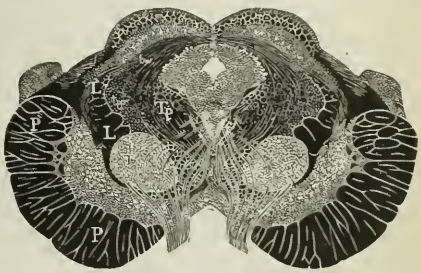

FIG. 14.

In the lion there is a slight separation between the horizontal main lemniscus and the bundle from the pes to the lemniscus of Wernicke (pedal part of stratum intermedium); in the cat the two approach more closely, and the latter constitutes an angle (open dorsad and laterad) with the horizontal expanse of the former. A fortunate set of sagittal sections from a cat reveals a remarkable confirmation of the course of this fasciculus in the dog, as well as an interesting relation to the trapezium. The main part of the stratum interolivare breaks up into numerous bundles, ramifying and meandering among the transverse bundles of the trapezium, thus producing a beautiful wickerwork pattern,[1] at the cephalic end of the trapezium field they re-collect and run exactly in the situation of the bundle from the pes to the lemniscus (to the "tegmentum" of Henle). The following differences are noted from the case of the human subject: 1. The bundle does not connect as abundantly with the ganglion of Soemmering; perhaps this indicates that the apparent relation with it, in man, is a spurious appearance. 2. But a small part joins the pes permanently; the main part is in juxtaposition for a part of its course only, it leaves it to radiate under and mesad of the nucleus tegmenti (perhaps in part entering it) to take a course which only basi-parallel sections can expose (see dog).

In his latest work[2] Meynert says: "Where these bundles of the internal capsule (certain intertwined fasciculi from the cortex—in the diagram to be referred to he changes about and derives them from the lenticular nucleus) run in the same height as the opposite *pes pedunculi* (he means the proximal internal part), they admit processes of the *substantia nigra Soemmeringii*, with which they are soldered into a compact layer behind the superficial layers. Where this fibre layer of Soemmering's substance, which I term *stratum intermedium pedunculi*, covers the tegmentum of the crus, it is bulged forward by the subjacent red nucleus of the tegmentum. In its further course the *stratum intermedium* exhibits a concavity applied to the biconvex deep mass of transverse

[1] This is one of the prettiest pictures in cerebral histo-anatomy, the *stratum intermedium* fibres bear an analogous relation to the transverse lemniscus, as the sagittal fibres of the pons bear to the transverse ones in man. There are not the same mediating nucleur intercalations. Near the main height of the trapezium there is a beautiful set of cells, not hitherto described, these are scattered in the meandering fibres in the more dorsal division, and of considerable extent. Not all the meandering fibres appertain to this stratum, the dorsal third or more, are derived from the reticular field of the oblongata.

[2] Psychiatrie, p. 48.

fibres of the pons, and in the oblongata appears to lie behind the pyramids as the most anterior layer of the anterior column, and internally to the olive."[1] He disconnects the lemniscus from the stratum intermedium, with which I agree in thinking that it should not be confounded.

This description corresponds in many features with the one I have attempted to give. It is singular that in the most obscure part of this tract Meynert should agree with the most modern authorities so nearly, and yet differ in regard to the simplest and earliest known part of its course in a territory with which he showed himself in his earlier work to be thoroughly familiar. His plate of the spinal cord (page 124, loc. cit.) only the eminence of its author saves from the epithet "puerile." He allows the interolivary stratum intermedium to pass *without any decussation* into the anterior column of the cord, occupying the field correctly assigned by Flechsig to the undecussated part of the true pyramids. He emphatically declares that the pyramids decussate *in toto*, so that there is no other explanation for his mistake than to suppose that he sticks the (interolivary) stratum intermedium where he loses it, to the undecussated part of the pyramid tract, where he picks the latter up; its upper origin he either ignores or is unacquainted with. The latter alternative is contradicted by a clause in his older (and for its day superior) treatise in Stricker's collection. The true course of the *stratum intermedium* (proven beyond question by the secondary degeneration of my case) in the piniform decussation still passes as a decussation of external pyramid fibres, with a slight doubt. This adhesion to the old error, worse confounded by the attempt to implant it on more modern views, is utterly incomprehensible.[2] It is true that some fibres take the course claimed by Lockhart Clarke, and after him by Meynert, but if the development and atrophy methods (of which the secondary degeneration is one) are entitled to a moment's consideration, they prove that the great mass of the stratum intermedium passes to the nuclei of Goll and Burdach, and that the admixture of pyramid fibres is slight. I have, in an earlier part of this article, referred to the topographical misunderstanding on this head.

There is no warrant for the designation of the direct myelo-cerebellar tract by Meynert as "lemniscus inferior" (from the cerebellum). Meynert's description had been superseded by Flechsig, who is entitled to the credit of its discovery (with Foville). His refusal to accept Flechsig's name may be a protest against the animus of Flechsig's warfare; if so, it is a singular one. If we include Meynert's *stratum intermedium*, the alleged pyramid tract in Goll's columns, the direct myelo-cerebellar tract, and the outer part of the anterior lateral column under the term lemniscus, we cover pretty much the entire periphery of the cord from the bottom of the anterior fissure round to the corresponding part of the posterior.[3]

The only tract which is correctly entitled lemniscus in Meynert's plate is the "lemniscus superior." It is greatly exaggerated, however, and he who is familiar with the results of Flechsig, which are accepted by nearly all neurologists, must be puzzled[4] on seeing this superior lemniscus made to cover a good half of the periphery of the cord, while the direct myelo-cerebellar tract covers just one-tenth as great an area. In truth, the relation is nearer the reverse. In Mayer's case there was secondary degeneration of the (true) lemniscus. As the case was of but a year's standing, it may not have covered all the area it might have ultimately extended over; it was situated in a line of prolongation intermediate to the lateral and anterior cornua, and at the periphery. The myelo-cerebellar tract, on the other hand, covers a large segment of the cord.

IV.—The Trineural Fasciculus.

Several years ago[1] I maintained that the so-called round bundle of Clark and solitary bundle of Stilling was not, as Krause claimed, directly derived from the spinal fibres of the same side. I derived it in the main from the piniform decussation, which, as direct anatomical observation and other methods referred to in the foregoing show, is a direct continuation of the stratum intermedium (interolivare). At that time, following Meynert, I regarded a larger part of the lemniscus as derived from the ganglia of the posterior pair of the corpora quadrigemina than is now done, and consequently supposed that these ganglia through the discovered connection, exerted their influence on vegetative life. The trineural fasciculus comprises a system of fibres imbedded in ganglionic substance, into which numerous of the internal arciform fibres can be traced. In the major part of its course it is constantly in receipt of new fibres through this ganglionic medium, and expends others which become roots of origin of the *nervus intermedius* (an aberrant branch of the glosso-pharyngeal, see Bigelow's and my own communications to The Medical Record of 1880), the *n. glosso-pharyngeus* and the *n. vagus*. Most authors add the spinal accessory to the list. In my earlier communications I held a reserved position on this head, but not venturing to contradict what was then the unanimous opinion, allowed but a minimum of its fibres to that nerve. Mendel, in a discussion with Wernicke, held in Berlin, denied such a connection *in toto*, not only for the accessory but also the vagus nerve; this I think is going too far. The vagus does receive rootlets from this fasciculus. On the other hand, I endorse his view, as against Wernicke, that the accessory is not so connected. I am not able to declare as positively as Mendel does, and as I did in the communications referred to, that the trineural fasciculus ends at the level of the gustatory nerves. It is not impossible that a slender prolongation continues on to the substantia ferruginea (locus cæruleus), though this is a mere suspicion with me at present.

As I maintained that the trineural fasciculus is a recurrent branch of the lemniscus tracts, its description is germane to our subject. My reasons for opposing Krause's view that it is exclusively a respiratory fasciculus (Respirations-Bündel) are the following:

1. It extends with undiminished diameter beyond the level of the pneumogastric nerve and distinctly connects with the glosso-pharyngeal and intermediate nerves.[2]

2. If the trineural fasciculus came from the cord, its origin would (Fig. 14) be very near the median line, in districts which we know have other destinations.

3. The fasciculi of both sides approach each other very closely, suggesting a decussation.

4. They or rather their ganglionic "sheaths" continually receive arciform fibres. These arciform fibres cross the raphe, and while many running in this direction are from the reticular formation, the majority come from the olive and the stratum interolivare.

5. While it is not impossible that, the decussation being established, such decussation may be from below—

[1] The above is a specimen of Meynert's language, and may serve to indicate the difficulties under which the translators of his anatomy labored. In plain English a free and logical rendition, embodying a consistent use of topographical terms, would be: "From the cortex, a flat layer of fibres converges toward the *substantia nigra*, being interpolated between it and the tegmentum as an *intermediate stratum*. The nucleus tegmenti, dorsad of it, causes a ventrally convex depression. After an admixture with the processes of the *substantia nigra*, this tract courses over the dorsal pons fibres, being concave in correspondence with the convex contour of the latter. Below (caudad of) the pons, it seems to lie immediately over (dorsad) the pyramid in the triangular field, between the latter, the olive, and the raphe.

[2] There is not the slightest reference to the results yielded by a study of secondary degeneration, though Mayer's, Homén's, and my cases were published between one and two years prior to the appearance of Meynert's last work.

[3] To characterize the diagram in question further, it may be stated that it is—where not absolutely erroneous—imperfect and theoretical. It does not correspond to the present state of science, and must prove a serious disappointment to the numerous students and admirers of Meynert.

[4] If the abnormally diminutive pyramid be erased, and the designations of the lemnisci reversed, Meynert's diagram may be turned up-side down, and will gain by the inversion, inasmuch as the uncrossed part of the pyramid, and the stratum intermedium will then come out right, while the deeper fissure will occupy the correct dorsal (posterior) position.

[1] Chicago Journal of Nervous and Mental Diseases, 1879.

[2] Duval discovered the connection of the *nervus intermedius* with the nucleus of the glosso-pharyngeal, and I demonstrated an additional origin from the trineural fasciculus. Unfortunately the chief specimen was ruined in class demonstration, so that I am unable to test some new questions that have arisen, as to the continuation of the fasciculus farther, or as I then taught, its cessation at this level.

that is, from the cord, upward, and not, as I maintain, from above (cephalic), across the median line and reflected back upward (cephalad) again—the direction of the arcuate fibres is against that view.

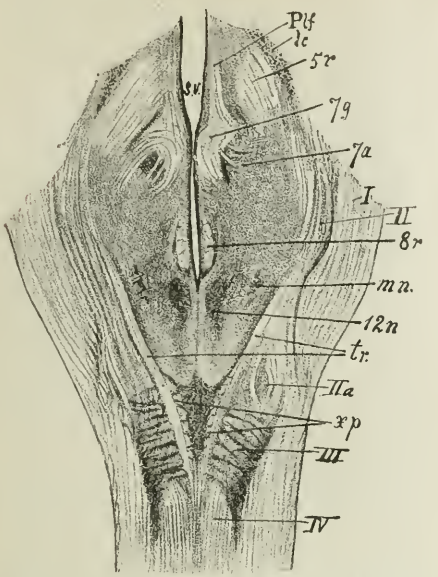

FIG. 15.—Section Parallel to the Floor of the Fourth Ventricle of Man. (Autopsy through Professor Little.) *sv., sulcus ventriculi quarti; lc*, locus cæruleus cells; *5r.* the enormous raphe root of the sensory division of the trigeminus; *7g, genu* facialis; *Plf*, posterior longitudinal fasciculus (oculo-nuchal co-ordinator); *7a*, ascending fibres to join raphe root; *I*, cerebellar myelobrachium, or posterior peduncle; *II*, fibres of reticular formation ascending in tegmentum; *8r, striæ* root of auditory, imbedded in its (?) nuclear substance; *mn*, nuclear mass of mixed system; *12n*, nucleus of hypoglossal nerve; *tr*, trineural fasciculi; *xp*, ganglionic processes, including fibres from the piniform (sensory) decussation; *III*, bundles of latter divided across in their ascension.

6. Direct observation shows that the lowest demonstrable fibres come directly from the processes of the piniform decussation. Occasionally a process is seen running outward, but it cannot be traced far, and transverse sections show that many rootlets passing from without inward and over the fasciculus, are only curved around, taking an arched course from the same decussational origin. All clear appearances demonstrate a connection with the decussation.

The fibres, although regarded of similar optic appearance in transverse sections, show two well-characterized varieties in lengthwise sections. The axis of the bundle is composed of thicker fibres with broad myelin sheaths which have a pale tint in the aggregate, absorbing little carmine; the surrounding fibres are finer, and in bulk fairly well stained, resembling the bundle which passes from the habenula to the outer peduncular ganglion [1] in this histological respect. In sections of the same direction as the one represented in the figure, the core bundle is not smoothly continuous, but interrupted, as if it consisted of slightly arched fasciculi, which may emerge at various points in the course of the fasciculus. The difference in the character of the fibres would indicate that the trineural fasciculus acts as a conductor for several functions.

In the case of secondary degeneration of the stratum intermedium, the functions of the mixed nerves, as far as deglutition was concerned was impaired. This fasciculus was healthy, but many of the arched fibres going to it were not—they had undergone degeneration. One fasciculus crossing out from the raphe, four or five "branches" distant from the hypoglossal nucleus (that is, very near the dorsal end of the raphe) was entirely healthy (Fig. 3, *t*; also Fig. 4). From the course of its bundles in the raphe, and its freedom from degeneration, it cannot come from the interolivary, but from the true olivary and reticular field portion of the lemniscus. The fact that this fasciculus is larger in the level of Fig. 4 than that of Fig. 3 proves conclusively that if there is a spinal origin for this bundle it must be a very subsidiary element.

Internal to the trineural fasciculus there are a number of separate fasciculi, continuous for as great a length and apparently originating in a similar manner. They are very clear in flat-wise sections and apt to be altogether overlooked in transverse ones. They cannot in higher levels be confounded with the longitudinal bundles running in the hypoglossal and vagus nuclei in lower levels, referred to by Mendel, though I am not prepared to deny a connection between them in the said lower levels.

(To be continued.)

[1] In an earlier day of cerebral anatomy, the fact that the stratum interolivare becomes lost in about the same region where a part of Meynert's bundle runs would have been regarded as suggesting a connection.

DISEASE GERMS.[1]

BY GEORGE M. STERNBERG, M.D., F.R.M.S.,
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IT is but a few years since "disease germs" were hypothetical things, in regard to the origin, nature, form, and *modus operandi* of which we possessed only vague and uncertain notions.

In this pre-scientific peroid of etiological inquiry, a favorite idea with those who assumed the existence of disease germs on theoretical grounds was that they are living particles detached from the diseased organism, capable, perhaps, in some instances, of self-multiplication external to the body, and having the power, when introduced into the body of a susceptible individual, of inducing morbid phenomena identical with those which, in a preceding case, were the cause of their origin. In other words, that they are both the cause and the result of the morbid phenomena which characterize the specific infectious diseases.

No experimental evidence has thus far been adduced in favor of this conception of disease germs, which is evidently unphilosophical, and is unsupported by observation or analogy. The only detached living particles known to science which are thrown off from the bodies of plants and animals, and which are capable of subsequent development, are the reproductive elements, the function of which is to preserve the species and not to destroy it; and observation teaches that as a general law disease is due to agents introduced from without, whereas the view above referred to would necessitate a belief in the intrinsic origin of the specific infectious diseases. For there could be no disease germs detached if there were no diseased organism to throw them off.

But the progress of science has made us acquainted with disease germs of another kind, which being *vegetable* parasites must in the first instance have been of extrinsic origin, even if at present they have, in certain cases, no other habitat than within the body of the animal in which they produce specific morbid symptoms.

Thus, if it be demonstrated—a very difficult matter, by the way—that the tubercle bacillus is found only in the tubercular products which result from its invasion of the bodies of man and the susceptible lower animals, it will be none the less improbable that this has always been the case. We must admit that this bacillus existed in nature before there was any tuberculosis, or we are forced to one of two conclusions: either the disease tuberculosis at one time occurred independently of the bacillus, or the parasite was created as it now is and implanted in the bodies of animals especially to produce this disease. The second alternative involves the acceptance of a theoretical conception which cannot be discussed from a scientific standpoint. It is evidently opposed to

[1] Read at the meeting of the American Public Health Association in St. Louis October 17, 1884.

the scientific conception which has forced itself upon careful students of nature in all parts of the world, and which is expressed in the word *evolution*.

If at any time in the past the disease tuberculosis existed independently of the tubercle bacillus, or of any other micro-organism, then we must deny that this parasite has any etiological import, or must at least assign it a secondary rôle, viz., that of carrying a non-living tubercle virus from a diseased organism and implanting it in a new soil. In this case the infectious character of the disease would depend upon the living parasite; but inasmuch as the disease must at some time have originated independently of the parasite, we could scarcely deny the possibility of its intrinsic origin at the present day. There is much to be said in favor of this view of the etiology of the infectious diseases; but it is opposed by the experimental evidence, which shows that "pure cultures" of known disease germs are as potent in producing the specific morbid phenomena as is material derived directly from the diseased organism.

In the case of anthrax there can be no doubt that this is true, and that living anthrax spores may produce the most virulent form of the disease independently of any non-living material derived from a preceding case. The experiments of Koch seem to have established the same as regards the tubercle bacillus, pure cultures of which are said to produce tuberculosis in rabbits and in guinea-pigs as certainly and as promptly as do inoculations with sputum or other material derived directly from the diseased organism. These experiments have been repeated by Watson Cheyne, of London, with the same result.

I cannot doubt that these gentlemen have obtained the results reported by them from inoculations with pure cultures in the sense that no other micro-organism was present in these cultures. The only possible question is whether these cultures were pure in the sense that they did not contain any remnant of a non-living tubercle virus. How many successive cultures must be made in order to insure this result we cannot definitely determine, but evidently more are required when cultivation is conducted upon the surface of a solid culture medium, than in fluid cultures in which a considerable amount of fluid serves to dilute the non-living material which in the diseased organism is associated with the living microbe. There can be no question, however, that a non-living poison which originated in the diseased organism independently of the parasite would, in the end, be excluded by the method of successive cultures, whether these are made in a fluid or upon a solid substratum. On the other hand, a virus produced by the parasite as a result of its normal physiological processes would be present with it in each successive culture.

It may well be that all of the different pathogenic bacteria produce special poisons to which their specific action is due. But a poison produced by the parasite itself, whether grown in an animal body or in a culture fluid, is evidently secondary as an etiological agent, although it may be an essential factor in giving the parasite pathogenic power. We may suppose that such a poison secreted by the invading micro-organism prepares the soil for its future growth; just as the abnormal growths upon various plants known as galls are supposed to be produced by the irritant action of some poisonous liquid introduced by the sting of an insect, which at the same time deposits an egg. A virus, on the other hand, which was produced in the diseased organism independently of any parasite, but which furnished the soil suitable for the development of a particular microbe, would be the essential etiological agent in the production of the morbid phenomena, and the parasite, if not a mere epiphenomenon without etiological import, would at least be only a secondary factor, capable, perhaps, of doing harm by inducing changes in morbid products, as, for example, the cheesy degeneration of tubercle nodules, and of transporting the virus to new localities and thus giving the disease an infectious character.

As heretofore remarked, this hypothesis must give way before the evidence furnished by pure cultures. And it must be admitted that the experiments of Koch leave very little ground for believing that it is true as regards tuberculosis. It is not safe yet to generalize, however, and it does not follow that it is not true for small-pox and other diseases in which pure cultures of the parasite present in diseased tissues have not been proved to be potent in the perpetuation of the morbid phenomena in other individuals.

We need a non-living poison or virus in order to explain the action of the tubercle bacillus; for I do not feel prepared to admit that the effects which follow inoculations with pure cultures of this microbe are due to mechanical irritation alone. I have recently repeated the experiments of Formad, of Philadelphia, in which he claims to produce tuberculosis by inoculations with finely powdered inorganic material suspended in water. My experiments have satisfied me that, when the material is thoroughly sterilized, and no tubercle bacilli are introduced at the same time, tuberculosis does not result from such inoculations. We know that the lungs of man are very commonly loaded with particles of carbon, and that these angular particles, which are much larger than the tubercle bacillus, do not give rise to the development of miliary nodules. Therefore, I say, we need something more than the bacillus to account for the formation of these nodules, in which the parasite finds a suitable soil for its development.

If tuberculosis was originally of extrinsic origin and is to-day produced by "pure cultures" of the bacillus, there can be no question that this something else is excreted by the parasite, and is consequently ever present with it ready to produce its specific effect when in contact with susceptible animal tissues. Not all vegetable tissues react in the same way to the sting of the various species of gall-insects, and in like manner we have differences in susceptibility to disease poisons among animals of different species, and among different individuals of the same species. The supposition that the different pathogenic organisms give off different kinds of poisonous products as a result of their normal but severally distinct physiological processes, is sustained by what is known of the action of non-pathogenic organisms of the same class in various processes of fermentation and putrefaction, and by the facts which relate to the influence of protective inoculations and the non-recurrence of the specific infectious diseases in the same individual. I have elsewhere discussed this subject (see my work on "Bacteria," p. 246), and cannot at present give my reasons for believing that insusceptibility results from acquired tolerance to the poisonous products evolved by pathogenic organisms, rather than to a change in the system which has rendered the soil unsuited to their development.

The question whether pathogenic bacteria are distinct species having permanent physiological characters upon which their pathogenic power depends, or whether they are varieties of common and usually harmless species which acquire this power temporarily as a result of special conditions relating to their environment, is one of the greatest importance, and one which is at present prominent in the minds of the leading investigators in this field.

Buchner's claim that the anthrax bacillus is simply a variety of the common hay bacillus, and that one may be transformed into the other by special methods of cultivation, has, upon fuller investigation by Koch, Klein, and others, been shown to be without foundation. We now recognize not only that these species have distinct physiological characters of a permanent kind, but also that during certain stages of their development they differ morphologically. Indeed, the specific distinction is sufficiently well marked by morphological characters alone. But it does not follow that there is nowhere in nature a non-pathogenic variety of the anthrax bacillus from which the pathogenic variety known to us has been derived.

So, too, in the case of the tubercle bacillus we are not acquainted with any harmless bacillus having exactly the same form and color reactions, and among known species the bacillus of leprosy is the only one which very closely resembles it. But it must be remembered that we have only just commenced the study of this extensive class of micro-organisms, and that thus far it is the pathogenic species which have received the greatest attention. When we come to know more of the bacterial flora of the exterior world, we may find that all of the species which invade the bodies of animals as harmful parasites are represented by harmless species which cannot be distinguished from them except by the test of inoculating susceptible animals.

In the case of an organism like the anthrax bacillus, which grows readily in a variety of culture fluids, and within comparatively wide temperature limits, it seems altogether probable that the conditions necessary for its growth may be found external to the bodies of animals and outside of our laboratories. But it would be an unwarranted assumption to suppose that its continuous development in this way must necessariiy modify its pathogenic power. For this is retained in full force through any number of successive generations in laboratory experiments, except when the cultures are subjected to the special conditions which have been shown to modify this power, and which, following Pasteur, we speak of as effecting an "attenuation of virulence." The question is whether a similar attenuation may not be effected by natural conditions, and whether the attenuation may not be carried to the vanishing point. This is possible, but we have at present no evidence that it is true.

In the case of the tubercle bacillus, it has been shown that the conditions of development are so restricted as to soil and temperature required that it may be doubted whether these conditions are ever found in nature. It grows slowly upon blood-serum prepared by Koch's method, and not at all unless the temperature is very carefully regulated to about 38° C. Evidently if in a tropical country the temperature were sufficiently elevated and uniform to insure its development, the proper pabulum might be wanting; or if this were present other bacteria which multiply more rapidly would most certainly take possession of it, in the absence of artificial precautions for their exclusion, before the tubercle bacillus had fairly commenced to grow. It seems probable, therefore, that this bacillus, as we know it, has no external habitat, and that it depends for its existence upon the conditions which it finds within the bodies of animals subject to the disease tuberculosis.

But, for reasons already given, we are forced to the conclusion that at some time in the past this bacillus had an external habitat; else we must concede that the disease tuberculosis was originally of intrinsic origin and must relegate Koch's bacillus to a secondary place in its etiology. We have among the higher animal parasites a certain number which have the power to shift for themselves and to bring up a family independently of the host upon which they habitually depend for their sustenance. Others depend entirely upon their host, and students of biology are familiar with the singular modifications which many of these have undergone to fit them for their parasitic existence, and which make it impossible for them to exist independently of the animal which they infest. No doubt is any longer entertained with regard to the fact that the structural anomalies exhibited by these parasites are due to modifications which have been effected gradually, and that useless organs have disappeared and useful ones have attained a special development under the influence of conditions relating to the environment of the parasite and in accordance with the laws of natural selection.

It is probable that the minute vegetable parasites which we know as "disease germs" have in like manner undergone various modifications, if not in form at least in their physiological characters; and it may be that some of them have thus lost the power of independent existence under natural conditions. Others may find the conditions essential to their development both within and without the bodies of animals. Indeed, we know that such is the fact as regards several species which have been shown by laboratory experiments to have the power of inducing infectious and fatal forms of disease in certain animals, and which, nevertheless, exist widely distributed in nature. Koch's bacillus of induced septicæmia in the mouse, the bacillus of malignant œdema, which is much larger and closely resembles the anthrax bacillus, and the micrococcus of induced septicæmia in rabbits, which I have especially studied, are all disease germs of this kind. Their pathogenic power is not a temporary character, but is limited to certain species of animals in the bodies of which they find conditions favorable for their development; and, so far as we know, the infectious diseases which they induce do not arise spontaneously in these animals.

Other disease germs, such as the micrococcus of fowl cholera and that of swine plague, are only known to us because they induce these forms of disease, and the question whether they exist in nature, independently of the animals which they infest, has not been definitely settled. If they do, we should expect to hear of the development of these diseases independently of infection directly traceable to a similarly diseased animal. I am not sufficiently familiar with the evidence to say whether it supports this view of the case or not. But as regards the germ of typhoid fever, which we can scarcely fail to believe in, although there has been no satisfactory scientific demonstration of its existence, and as regards the cholera bacillus —or spirillum—of Koch, which, there is good reason to believe, bears an essential etiological relation to the Asiatic pestilence, there seems to be ample evidence of power of multiplication external to and independently of the human organism. We have known for some time that the germs of these diseases are sown in the discharges of those suffering from them; that certain conditions as to organic pabulum and temperature are necessary for the germination and rapid multiplication of this kind of seed; and that the evidence of such germination and multiplication is found in an abundant harvest of fresh victims.

But do these germs in their external development undergo modifications which cause them to lose or to gain in pathogenic power, and are they ever harmless organisms which may be introduced into the human intestine with impunity? The wide difference in the malignancy of different epidemics and the fact that during the same epidemic the disease may at first assume a mild form and subsequently develop a most malignant character, indicates that the germ, if it be in truth the essential factor in the production of the disease, must undergo modifications of its pathogenic power. And once having admitted the possibility of such modifications, it is hard to place a limit upon them.

There are two infectious diseases of man, one of which has been lately proved to be due to an invasion of the affected tissues by micro-organisms, and the other of which I can scarcely doubt has a similar etiology, which seem to me strongly to support the view that bacteria which are ordinarily harmless may, as a result of special conditions relating to their environment, acquire pathogenic power. These diseases are erysipelas and hospital gangrene. It seems to me beyond question that these diseases may, under certain circumstances, originate *de novo*, that is, without direct or indirect infection from a preceding case. And hospital gangrene especially is so rare a disease that we can hardly suppose that the outbreaks which occasionally occur at widely remote localities are necessarily connected with preceding cases, although these diseases are known to be highly infectious and to cling to infected hospital wards with great tenacity.

I have in mind an outbreak of hospital gangrene which occurred under such circumstances as seem to me to

justify the belief that the epidemic was of local origin. In the summer of 1862 a large number of sick and wounded men from the army of the Potomac were placed upon a transport vessel at Harrison's Landing, Va., and brought directly to Portsmouth Grove, R. I. This location possessed great natural advantages both from a sanitary and from an æsthetic point of view, and, before the arrival of this ship-load of sick and wounded soldiers enjoyed a high reputation for salubrity. A quiet summer hotel, looking out upon the waters of Narraganset Bay, formed the nucleus of the general hospital which was quickly built. Until this was completed the patients were cared for in hospital tents. Soon after the completion of the hospital building I was ordered to Portsmouth Grove, and upon my arrival there was placed in charge of the surgical wards. These were detached frame buildings, made of new lumber and constructed upon the plan which had been adopted for our barrack hospitals, and which is generally conceded to have been excellent. My wards were full of cases of suppurating gunshot wounds. This was before the days of carbolic acid, at a time when we had no positive knowledge of disease germs, and before we had learned to look upon a sponge as an abomination not to be admitted to a surgical ward. My patients were treated in the usual manner with cold-water dressings to recent wounds, and frequently renewed absorbent dressings and ablutions with warm water when suppuration was fairly established and there was no inflammation. I dare say the saucers for giving off chlorine gas, which were in those days supposed to be an important element in maintaining the purity of the atmosphere in the wards of our military hospitals, were duly arranged beneath the several beds. Whether they were or were not, a matter in which my memory does not now serve me, is of small importance; for we now know that it is impossible to disinfect the air of an occupied apartment, and that the presence of chlorine gas or of carbolic acid in respirable amounts has no terrors for disease germs.

Up to a certain point my patients continued to do well, but after a time I recognized the presence of some malign influence in the wards which was counteracting the *vis medicatrix naturæ* upon which I relied for the cure of these gunshot wounds, and which caused wounds that had previously been healing kindly to assume an angry look and to discharge an undue amount of unhealthy pus. Very soon the condition of some of these suppurating wounds became still more alarming. Instead of a simple arrest of the healing process and an unhealthy discharge, I had to deal with a rapidly extending necrosis of the tissues. The most trifling wounds in robust young men which were cicatrizing in a most satisfactory manner, as well as those more serious injuries which had necessarily given rise to protracted suppuration and depression of the vital powers, would suddenly commence to extend by sloughing, and a superficial wound the size of a twenty-five-cent piece was liable within two or three days to become an ugly and deep sloughing ulcer the size of my hand or larger. In a word, I had to deal with that dread disease hospital gangrene. I can hardly doubt that this rapidly developed necrosis of tissue, extending from the wound as a centre, was due to invasion by some micro-organism, and I infer that the pathogenic power exhibited by this hypothetical organism was developed in my wards as a result of exceptional conditions of environment by some omnipresent and usually harmless microbe. Otherwise, how is it that solitary cases of suppurating wounds scattered far and wide over the country never become affected with this disease, which only occurs where numbers of wounded men are massed in hospitals? That the disease was a local one, due to some noxious agent which invaded the wound, and which was transmissible from one to another, and was not due simply to a depressed condition of the general health of those attacked, was evident. This was especially shown by the results attained by vigorous local treatment in connection with the segregation of patients and general measures of disinfection, when by the thorough use of the actual cautery or of fuming nitric acid the entire wound was thoroughly and deeply cauterized, the infectious agent was destroyed, and the *vis medicatrix naturæ* proved sufficient to effect a speedy cicatrization of the deep and broad ulcers which resulted from the rapid sloughing and the heroic treatment required to arrest it. Facts of this kind, taken in connection with circumstances relating to the gradual development of malignancy in local epidemics of other infectious diseases, such as diphtheria and scarlet fever, and the evidence relating to attenuation of pathogenic power in known disease germs, cause me to give more weight to the supposition that this pathogenic power may in certain cases be an acquired physiological character, rather than an inherent and specific one, than is accorded to it by Koch and some other leading investigators in this field. I believe, however, that Koch admits the possibility that his cholera bacillus may be a pathogenic variety of a harmless organism. At least he has submitted the question for discussion.

Klein, of London, also favors the idea that pathogenic power is a specific and constant character belonging to the micro-organisms which exhibit it. We must admit that this is true in the case of such diseases as small-pox and measles, if they are in truth germ diseases, for we have no evidence that these diseases ever originate independently of preceding cases, or that the infectious principle is capable of multiplication external to the human body. But I am very much inclined to believe, for reasons already given, that it is not true as regards the various septic organisms which are known to us by laboratory experiments. I am convinced, however, that there are among these lowly plants a large number of distinct species, each having its own independent life-history, and each subject to modifications of function, and possibly of form, as a result of gradual changes in its environment.

Billroth and some of the earlier observers maintained that the various forms of bacteria which are found in organic infusions belong to a single species of plants—the *coccobacteria septica* of the author named. But this view is no longer tenable. Nor can I agree with Nägeli that there exist but a small number of species, each of which may assume a variety of forms. This author has said: "Each of the veritable species of schizomycetes is not limited to presenting itself under the different forms of *micrococcus*, *bacterium*, *vibrio*, and *spirillum*, but can also show itself as the agent of the acidification of milk, of putrefaction, and as the agent producing several maladies." My own observations have convinced me that there are, for example, numerous species of micrococci, and that micrococci never under any circumstances develop into elongated or spiral bacteria, and do not form endogenous spores, their life-history consisting in multiplication by binary division. I have had in cultivation at different times several different species of these minute plants, and have found that by proper precautions pure cultures may be maintained through successive generations. In other words, that the several species "breed true." Thus the yellow micrococcus—*M. luteus*—produces successive generations of yellow micrococci; and although the individual cocci cannot be distinguished by their form alone from other micrococci having a different color, yet this character being constant is a sufficient specific distinction. The known species of bacilli which may be distinguished from each other by form, dimensions, or physiological reactions, are already sufficiently numerous, and I cannot doubt that the number of unknown species is far greater. Our knowledge of this extensive microscopic flora is still very incomplete, and is obscured by erroneous observations and the confusion which has arisen from the minute size of these microscopic plants and the intermingling of numerous species in the same organic infusions. Methods of isolating and maintaining pure cultures of the several species which

have been devised, and especially Koch's method of surface cultivation, together with improvements in technique and in optical appliances which have been made within the past few years, have, however, opened the way for rapid progress in the future, and we may hope that before many years we will know much more about disease germs than we know to-day, and that the important questions to which I have briefly referred relating to their origin, relationships, and *modus operandi* will finally be settled by the experimental method.

Unless, however, the few individuals in this country who have endeavored to take part in these researches receive more encouragement and substantial assistance from some source in the future than they have received in the past, we shall have the humiliation of still receiving our knowledge of disease germs at second hand, and of knowing that this great nation, which has taken the lead in so many branches of scientific research, has contributed little or nothing to this important subject.

I shall now endeavor to make you familiar with the morphology of a few disease germs, and with that of some harmless organisms of the same class, by projecting upon the screen some of my photographs from nature—photo-micrographs. Should any gentlemen of the press be present, I beg that they will not refer to the objects which they are about to see upon the screen as "bugs," as did an intelligent reporter in New Orleans in giving an account of a lecture illustrated in the same way which I delivered in that city some years since. By the way, the popular idea of a disease germ in the city referred to at the time mentioned seems to have been that it is a bug of some kind; for in the Mardi Gras procession of the same year, an honored member and vice-president of this association, whose death we were soon after called upon to mourn, made his appearance in *papier-maché* upon one of the flats, as engaged in fishing for germs. In his hands was a slender fishing-rod furnished with a hook and line, and from the hook dangled a nondescript creature which represented a recently captured germ, and which resembled a Louisiana mosquito more than anything else; perhaps this was the most pestiferous creature with which the inventor of this tableau was acquainted. At that time a "germ-hunter" was thought by many good citizens, and by not a few of our own profession, to be a crank who deserved no encouragement, and was a fair subject for the shafts of ridicule and scorn. But the world moves, and many of these honest citizens, including some of the then scornful members of our own profession, are now prepared to swallow germs served up in any style, so long as they are imported. And, indeed, they may, in my opinion, swallow with impunity some of these imported germs, as for example the *bacillus malariæ* of Klebs and Tomassi-Crudeli, or the yellow fever germ of Domingos Freiré, of Brazil.

Although I object to my disease germs being called bugs, I cannot find fault with another gentleman of the press, who, on a different occasion, gave his impressions of the morphology of the objects which he had seen upon the screen by telling the readers of the journal which he represented that some of these objects looked like Bologna sausages and some like oysters on the half shell. You will at once recognize the Bologna sausages when the photo-micrograph of a chain consisting of four bacilli is projected upon the screen, but I am still in doubt which of my photographs from nature suggested oysters on the half shell.

State Medical Examiners in Pennsylvania.—At a stated meeting of the Philadelphia County Medical Society, held October 1st, resolutions approving of the appointment of a State Board of Examiners, and directing the appointment of a committee to draft a law for the creation of such a Board, were unanimously adopted.

M. Charcot has been elected a member of the French Academy of Sciences, in place of the late Baron Cloquet.

NASO-PHARYNGEAL FIBRO-SARCOMA REMOVED WITH GALVANO-CAUTERY ÉCRASEUR.[1]

By R. P. LINCOLN, M.D.,

NEW YORK.

The specimen I present to the Society to-night, I removed, July 22d, from a boy sixteen years of age. The history of the case is in brief as follows: The patient is of Irish parentage, never very strong and always a sufferer from nasal catarrh. He first noticed obstruction to nasal respiration in the autumn of 1881. At that time, and ever since, he has had frequent hemorrhages, the blood flowing first from the right nostril, but soon from both nostrils and the mouth. The quantity must have been considerable, for he described it as at times amounting to bowlfuls.

It was usually excited by active exercise, as running; latterly stooping would start it. Sometimes he would be awakened at night by a hemorrhage.

In the spring of 1882 the right nostril was stopped up, and within a year of this time both were occluded. About a year ago the tumor appeared to view at the margin of the right nostril, and at about the same time it could be seen in the pharynx when the mouth was opened.

In November, 1882, an attempt was made to remove the tumor by means of ordinary polypus-forceps, but was abandoned without accomplishing the desired result. I first saw saw the patient July 12, when he was referred to me by Dr. Satterthwaite. At that time there was a slight but noticeable fulness of the right side of the nose. The right nostril was filled to its margin with a growth covered with mucous membrane of a pink color. The septum nasi was crowded well over to the left. On examining through the mouth, the soft palate was seen deflected to a perpendicular, extending a little below its border, and filling the post-nasal space and pharynx was a tumor of the same appearance as that in the nostril, but with its inferior pear-shaped base rough and ulcerated in spots.

A further examination proved that the two presenting masses were parts of the same tumor, and attached to the vault of the pharynx and roof of the right nostril with a large pedicle and extensive attachment. As the growth was very large, exceedingly vascular, and evidently growing rapidly, I advised an immediate operation with the galvano-cautery écraseur, without the preliminary treatment by electrolysis, which I have heretofore practised in similar cases treated and reported by me. I also insisted that subsequently the stump should be thoroughly destroyed by means of the galvano-cautery. Other reasons that influenced me in deciding to operate at once was, that I had prepared to leave the city till September, and I feared that a delay till my return would find the patient still more reduced physically than at this time. Moreover, a fatal termination was liable to happen.

July 22d.—With the kind assistance of Drs. Satterthwaite, Goodwillie, and McCarroll, I proceeded to operate, at the hospital of the New York Post-Graduate Medical School, in the following manner: The patient having been anæsthetized I passed along the floor of the right nostril a looped platinum wire, protected by a double canula, the two parts of which could be disengaged from each other without removal, for the greater facility of carrying the wire around the base of the tumor. The loop being brought to the margin of the palate, was drawn backward, opened, and carried below and behind the pendulous portion of the tumor up to its attachment at the base of the skull. This was accomplished by the conjoined manipulation of the fingers of one hand, while the two parts of the canula, now separated, were operated by the other hand, and at the same time withdrawn, leaving the wire surrounding the pedicle at its base. The terminals of the wire were next passed through the

[1] Presented at the New York Pathological Society, October 8, 1884.

leader of the galvano-cautery handle, and having been tightened and connected to the battery, the pedicle was slowly cut through without hemorrhage. The tumor was then withdrawn through the mouth. It measured in its greatest length four inches, and two and a half in thickness, the latter being the portion that extended into the pharynx, while the former was the part that protruded into the nostril. The cauterized surface measured two inches by one and three-fourths. Its weight, five days after the operation, was two ounces and three-fourths. Its freshly cut surface presented a bluish-white fibrous appearance, mottled here and there with a purple color marking the seat of interstitial hemorrhages.

Dr. George R. Elliott kindly made a microscopic examination of the tumor and pronounced it a fibro-sarcoma.

On account of the interest attached to this case, I will quote in full Dr. Elliott's report.

"There are round and spindle cells, having large granular nuclei; there are also branching cells distributed throughout the entire mass, and in places these cells are aggregated together. In many portions of the tumor true fibrillated tissue is present. The above tissue elements are present in the following order as regards bulk: First, fibrous tissue; second, sarcomatous tissue (round and spindle cells); third, myxomatous tissue (round and spindle cells). The tumor is quite vascular, and numerous sites of hemorrhage, old and recent, exist. In the fibrous portions the walls of the blood-vessels are greatly thickened. In the truly cellular portions of the growth the vessels have no distinct walls, and appear to be mere vascular channels running throughout the cellular substance."

A week after the operation I examined the patient at my office, and found the cut surface well cleared off and presenting an apparently healthy wound, and appointed the 1st of September to apply the galvano-cautery to the seat of the growth, so as to completely destroy all abnormal tissue. This practice I believe is essential to prevent a recurrence of the growth. The patient neglected to keep the appointment and I did not see him till September 17th, when I found the wound entirely healed and presenting a healthy appearance, except a small portion of the cicatrix near the posterior entrance to the right nostril, where there appeared to be more vascularity and a little more prominence than the surface in general exhibited. I was anxious to carry out my plan of treatment without delay, and appointed the following day for that purpose, but I have not yet been able to secure the co-operation of the patient.

To Facilitate the Passage of the Catheter when the Deeper Portion of the Urethra is Especially Sensitive.—Dr. Andrew H. Smith, of New York, sends us the following practical hint: "In the absence of actual stricture an undue sensitiveness of the membranous portion of the urethra often causes pain and spasm the moment the catheter reaches that portion of the canal. As the operation is usually performed, the difficulty is increased by the fact that the back of the instrument reaches the sensitive portion of the canal in a dry condition, that is to say, the oil or other lubricating substance with which it was smeared, has been wiped off by contact with the walls of the urethra before the point is reached at which a lubricant is most needed. This difficulty can easily be overcome in the following manner: Immerse the catheter in oil, in such a way that the oil will fill the lower third of the instrument. Then close the upper end with the finger, and keep it closed until the back of the catheter reaches the sensitive spot. Then remove the finger and allow the oil to flow out of the eye of the instrument and bathe the surface of the membrane. If, at the same moment, the catheter is carried gently onward, it will often enter the bladder as easily as it has passed the wider portion of the urethra."

A UNIQUE GLASS WOUND.

Successful Ligation of the Left Common Carotid Artery and Internal Jugular Vein.

By R. M. STONE, A.M., M.D.,
OMAHA, NEB.

At noon, on May 8, 1884, Melvin S——, aged twenty-four, while assisting in the removal of a plate glass 4 feet by 8 feet, was precipitated into the cellar, the glass following, and of course being broken in its descent. S—— jumped to his feet unaware that he was injured, but in the next instant saw a stream of blood shooting up from beneath his left ear. He recognized at once that his jugular vein was cut and that he must have assistance within a very few moments or perish.

A few days before this occurrence his father and he had been discussing the question of what to do for a person bleeding from a wound; Melvin then had said that should he see such a case he should jam his thumbs deep into the wound and try and hold the vessels till help came. So with rare presence of mind he jerked off his glove, pressed the ball of his left thumb hard against his neck below the wound, and ran south some thirty or forty feet to the cellar stairs, then north across the street to the nearest physician's office, not less than three hundred feet from where he fell. He ran so rapidly that his father chasing him could not catch him. Melvin rushed into the open office, saw no one present, wildly tried the inner doors in the vain hope that Dr. Swetnam was within, exclaiming, "O Doctor, why are you not here?" and again staggered on to the pavement. I happened to be standing in front of my office, quite near, and saw a friend across the street frantically gesticulating and beckoning me toward the corner. I ran and soon saw Melvin staggering, bleeding, and gasping, a terrible torrent of arterial and venous blood pouring side by side from his neck. I thrust my thumb deep down into the vast opening and with my elbows turned him on to his side on the door-step. By pressure with my right thumb on the vessels from below, with my left against the base of the skull being able to feel plainly the styloid process, I was able to check the flow almost entirely. I sent for assistance and in a very short time had the gratification of seeing Drs. M. A. Rebert, E. W. Lee, and Geo. B. Ayres at my side. No surgeon was ever more happy at the sight of a silk thread than I, when I saw Dr. Lee coming running with one in his hand. By this time Melvin was almost gone, his face deathly white, eyes rolled upward, jaw dropped, and he was gasping and struggling for his apparently last breath. We all had the one thought that he could not live long enough to permit ligation.

The position of the wound beneath the ear showed that the arterial blood must come from the carotid; the depth of the wound, which admitted my left thumb over two inches, the fact that I could feel the styloid process and beyond it, made it probable that the venous blood came from both jugulars. The frightful loss of blood, the certainty that the patient would die before the severed external carotid could be caught in the wound and ligated, the possibility that the internal carotid was either severed or injured made it necessary to tie the common carotid; this and the internal jugular vein were then ligated above the omohyoid by Geo. B. Ayers, M.D.

Meanwhile Dr. Rebert had taken my place, and thrust his thumbs into the wound. After the ligation of the carotid, he also observed that his thumb went beyond the styloid process and apparently to or near the jugular foramen, and the slightest removal of the thumb from the base of the skull allowed a seemingly undiminished stream of blood to pour forth.

We felt that our patient was too near death to allow us to search for the distal ends and ligate, and that a compress soaked in dilute Monsell's solution was our only resource. A pledget of cotton, followed by layers of sheet-lint, were quickly placed in position and the hemorrhage was completely arrested. Several other face and

scalp wounds were sewn up while awaiting a vehicle to carry Melvin home.

The operation had taken place, fortunately, in the open air, with the best of light and air, except as interfered with at times by the anxious hundreds who stood watching.

The father had sat holding his son's hand during the trying ordeal, and Melvin had gone through with it most bravely, answering once or twice as we spoke, fearing he was dead, "All right yet, father, hold my hand." He told me afterward that the operation gave him no pain, that the condition following the loss of blood was that of anæsthesia. A stimulant had been given and the pulse, which was at times very feeble and almost imperceptible, became fuller and stronger, and he bore the ride home remarkably well. Melvin had shown so much pluck, judgment, and vitality that, though we dared not think he had a ghost of a chance for final recovery, we could not help the thought that if any one could recover from such an injury he was the one.

Though our patient had passed safely through one of the greatest dangers that ever befell a man, yet we knew, and he soon learned it too, that he must face the other dangers of secondary hemorrhage and pyæmia, none the less to be feared.

Melvin rallied within two hours, by the aid of hot bottles, became warm, and had a fair pulse of 76. He received quinia, gr. iij., and morph., gr. one-eighth, every two hours; and whiskey, ℥ j., and a glass of milk every hour. We crowded the milk to the amount of a gallon a day, so as to make up as rapidly as possible the loss of blood. By 7 P.M. reaction had well taken place, the heart's action was strong, his voice clear and strong, the milk had been assimilated and we suspended the drugs mentioned and gave fl. ext. ergot, ℥xv.; sodium bromide, gr. xv., every three hours instead. We continued these drugs for their action on the circulation at increasing intervals for four days, suspending them as we saw indication of beginning strangury, caused by the ergot, which ceased very soon upon its withdrawal. I have a very frequent record of the pulse and temperature up to convalescence, but it would only be tedious to insert it; suffice it to say that his morning temperature was between 99½° and 100°, uniformly for twenty days, and his pulse between 70 and 80; his evening temperature was between 100½° and 101°, uniformly for twelve days, except on one occasion, the night of the seventh day, when it reached 101¾°, while his evening pulse was 82 to 84 usually, rising to 96 and 100 on three occasions only.

Besides the medicines mentioned I gave our patient from five to ten grains of quinia, with an equal amount of lactopeptine, daily during the first two weeks, except on the night of highest temperature, when we gave fifteen grains. I gave him one-eighth grain of morphia twice or thrice daily by the mouth for three days, and, after that, from one-eighth to one-fourth grain hypodermatically from thrice to once daily during the next fifteen days.

The margins of the compress were kept sprinkled with Wyeth's finely powdered boracic acid until pus began to flow from beneath, when the compress and margins were thoroughly and almost constantly irrigated with a solution of the bichloride of mercury 1 to 2,000 or 1 to 4,000. While irrigation was not going on and during sleep a piece of sheet-lint, previously soaked in the same solution, was laid over the wound. Hunyadi Janos water was used internally, and rectal injections of warm water with glycerine and ox-gall added to counteract the constipation caused by a milk diet.

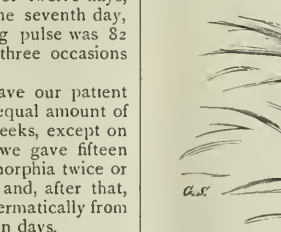
Our patient's stomach remained in excellent condition during the whole time; he drank and assimilated large quantities of milk and two egg-nogs, with a little sherry or port wine in, daily. Owing to the head bandage over the compress his position was necessarily a constrained one, and yet he rested well every night and was delirious but a few times, and only then on waking; he suffered from headache on the third and fourth days only.

During the ten days following the accident I watched most anxiously and often at the bedside, dreading the appearance of secondary hemorrhage, and had the pleasure of seeing this dangerous period pass without the slightest trouble from this source, or the other of pyæmia.

On the third day there was pus at the wound of ligation, but no moisture whatever at the margins of the compress. On the sixth day I had the pleasure of a visit from my venerable friend, Dr. Louis Bauer, Dean of the St. Louis, Mo., College of Physicians and Surgeons, and we were all very glad of the privilege of his counsel. His views as to the necessity of then cutting the bandage over the compress, loosening thus the irksome pressure, and the very gradual removal day by day of the layers of the lint compress coincided with our own, and this was done. He assured us that the plug in the ends of the vessels must be well organized, and we had nothing to fear in the very cautious removal of the compress. On the seventh day pus began to flow quite freely from beneath the compress, and from this time on the bichloride solution was most assiduously used; on this day occurred the only notable rise of temperature, and I greatly feared that pyæmia had indeed begun; the temperature and pulse, however, quickly fell, the delirium subsided, and we had no further cause for uneasiness.

Little by little I had removed the layers of the compress, which allowed better irrigation, and on May 17th there remained but the pledget of cotton, loose, easily moved, and adherent in a few spots only. Melvin had now passed nine full days, had no fear whatever of secondary hemorrhage, was jovial and happy, and kept asking for a cigar.

On May 23d, the fifteenth day, the cotton pledget came away; though a very little traction could have removed it at any time since May 17th it was deemed best not to remove it and thereby possibly endanger the integrity of the clots in the mouths of the vessels. We now could see the full size of the cavern, though granulation had been going on for some days; it was, by careful measurement, 1⅜ inch in depth and 2½ inches wide at the surface, tapering to ½ or ¾ inch in width at the bottom: on the front wall of the cavern, near the bottom, could be seen and felt the styloid process. On May 25th a photograph was taken, from which the accompanying



woodcut was made. The walls of the cavern were lined with the most beautiful and healthy granulations, which, under the irrigations, remained so and very rapidly filled the cavity. On June 5th the cavity was reduced to three-fourths of an inch in depth and width, and on June 27th a fine probe could hardly be inserted in the cavity, and only a slightly more deep than normal depression existed beneath the ear. We had expected a salivary fistula to remain, since the parotid gland was laid wide open, but it did not.

On June 12th, the thirty-sixth day, I removed one of the ligatures. The other, which had previously resisted quite strong traction, was removed on the seventy-ninth day.

On June 24th Melvin was able to come down town and receive the congratulations of the many friends who had often enquired about his condition.

What condition now existed? The facial nerve having been severed, our patient is unable to frown with the

left side of his forehead, cannot close his left eye, has no motion of the muscles of the left cheek, his tongue points far to the left when protruded, the left angle of his mouth is one-half or three-fourths of an inch beneath the right, and he is one of the few unfortunate individuals who literally laugh out of one corner of their mouths. He has suffered considerable inconvenience from his exposed cornea; lachrymation has been profuse two or three times from irritation, and this will no doubt prove the most serious source of trouble. He is acquiring the habit of brushing the cornea with his upper lid, and hopes in this way to get along, but I fear that it will not answer, and sloughing of the cornea may result.

There are a few features of the case that are unusual, and I think worthy of special mention. Superficial glass wounds are numerous, and wounds involving the radial and ulnar arteries and the palmar arches are quite so, but I cannot find recorded a case of a wound of the carotid region made by glass. This was also one of the rare cases where distal ligation was absolutely out of the question; any attempt in that direction would certainly have been fatal, and no surgeon of good judgment would for a moment have thought of it.

But the most interesting and unique feature about the case seems to me to be that the internal jugular vein was probably shaved off close to its emergence from the jugular foramen, and if so, rendered distal ligation absolutely impossible. An autopsy alone could demonstrate this to have been the fact; but the great depth of the wound, the fact that after ligation of the carotid the slightest removal of the thumb from, at, or very near the foramen, was followed by a terrible welling up of venous blood, incline us to believe that this was the case. I can find but one similar case on record, that of Kochers, found in the "International Encyclopedia of Surgery," vol. iii., p. 504. He had a case of a stab between the fifth and sixth cervical vertebræ. He says that he removed clots and seized "the bleeding point with long forceps, but it was impossible to tie any vessel as the ligature had nothing to grip."

Whatever was the case as regards this point, I trust the history will prove of interest and value, and worthy of record.

CEREBRAL LOCALIZATION—THE CENTRES FOR VISION.

By PHILIP ZENNER, A.M., M.D.,

CINCINNATI, O.

(Continued from p. 345.)

In the three preceding papers we have given the data from which we concluded that a limited area of the cortex in the posterior part of the hemispheres is in close relation with the retinæ, this area, therefore, possessing visual functions. We wish now to map out, as nearly as may be, the more precise relationship of the visual area to the retinæ in man, and to consider some other questions, which deal more closely with the exact functions of the cortical centres.

Relation of optic tracts to retinæ.—We must premise the consideration of relationship of cortex and retina by that of the optic tracts to the retinæ, for, as will subsequently appear, the optic tract is, probably, only in relationship with the hemisphere of the same side, and, therefore, knowing its relationship to the retinæ, we will already have acquired knowledge on the final question—the relation of cortical centre and retina.

In quite a number of instances after destruction of one eye, and atrophy of the corresponding optic nerve, atrophy of fibres in both optic tracts was observed. This atrophy in the optic tracts, always involving only a part of each, is usually determined with some difficulty, and there is consequently some variance in the reports of the extent to which each tract degenerates. Mauthner,[1] after carefully examining all the reported cases, concludes that the larger number of fibres of each optic nerve cross over to the opposite optic tract, while a smaller number of fibres enter the tract of the same side, the proportion of crossed to uncrossed fibres being as three to two.

A number of cases have been reported where hemianopia followed lesions of an optic tract. In most of them the entire tract was not destroyed or there were other complications, so that they can not be utilized for our present purpose. But in one instance, a case of Gowers,[1] there was complete degeneration of one optic tract without involvement of any other important part, so that the case answers our purpose admirably. In this case, according to Gowers' report, there was "a blindness in the symmetrical halves of both fields of vision, which reached in each one to the median line."

There is an apparent discrepancy between the clinical manifestations in Gowers' case, where blindness reaches to the median line, and the pathological observations that more fibres of the optic nerve pass into the opposite optic tract than into that one of the same side. But this discrepancy is only apparent. For a vertical line passing through the point of fixation does not divide the retina into two equal halves. The nasal segment is larger than the temporal, and therefore receives a larger number of fibres from the optic nerve.

Relation of visual area to retinæ.—What has already been learned of the relations of visual areas and retinæ in the lower animals, as well as the relationship of optic nerves and tracts just mentioned, naturally lead us to expect that in man the visual area of each hemisphere is in relation with one half of each eye. Observations in animals lead to this belief, because we find that the higher the animal the more nearly each hemisphere is in equal relation with both retinæ. Thus, in rabbits one visual area is almost alone related to the opposite eye. In dogs about one-third of the visual area is devoted to the eye of the same side; while in monkeys, according to Munk, each visual area is devoted to one-half of both eyes.

The direct observations in man seem to justify this expectation. Of Baumgartner's case it is expressly stated that the hemianopia reached to the point of fixation. Of Curschman's, Marchand's, and Westphal's cases it was said that there was complete hemianopia. In other instances, as cases of Nothnagel, Wernicke, and Stenger, the hemianopia did not reach to the point of fixation and the loss of the field of vision was more extensive in one eye than in the other. But in the latter instances the visual area of one hemisphere was, apparently, not altogether destroyed. So that we may safely conclude from the above cases that each area is in relation with one-half, or almost one-half[2] of both retinæ.

One of the cases given in the previous paper, that of Nieden, seems to throw light on the more exact relationship of visual areas and retinæ, and to point to the existence of the same relationship in man as Munk had observed in dogs, that is, that the external portion of the visual area of one hemisphere is in relation with the temporal half of the retina of the same side, while the median portion of the visual area is in relation with the nasal half of the opposite retina. For in Nieden's patient the original injury apparently involved but a small part of the occipital lobe, that nearest the longitudinal fissure, and there was at that time paralysis of the nasal portion of the opposite retina. At a later period, when probably the process of cicatrization had produced some changes in the part of the occipital lobe lying more externally, there was also paralysis of a part of the temporal segment of the retina on the same side.

Single vision with double retinal images.—Wernicke,[3] taking as a basis that each visual area is devoted to the corresponding halves of both retinæ, and that the more

[1] Gehirn und Auge, p. 427.

[1] Centralblatt f. d. Med. Wissenschaften, 1878, No. 31.

[2] The reason for thus modifying the statement will appear later.

[3] Gehirnkrankheiten, vol. i., p. 236.

proximate relationship in man is the same as Munk had found it to be in dogs, has thus explained the existence of single vision with double retinal images. The explanation is so beautiful, and, withal, so simple and natural, that it, in itself, tempts us to accept as true the premises upon which it is based.

According to these premises the median half of the right visual area is devoted to the median or nasal half of the left retina, while the temporal half of the right visual area is devoted to the temporal half of the right retina; and in each instance the segment of the visual area is so related to the segment of the retina that the central part of the latter is related to the central part of the visual area, its peripheral parts to the peripheral parts of the latter.

This relationship, as well as the projection of the retinal images upon the visual areas, will become more perspicuous by attention to the accompanying diagram: *o p* represents the right, *m n* the left retina; *N P* the right, *m o* the left visual area; *c* the macula lutea. *c n*, the nasal half of left retina, is projected upon *C N*, the median half of right visual area, while *c m* is projected upon *C M*, *c* being projected upon *C*, and *m* and *n* upon *M* and *N* respectively. As *c*, the most sensitive part of the retina, is projected upon *C*, the central part of visual area, the latter is the most sensitive part of the visual area.

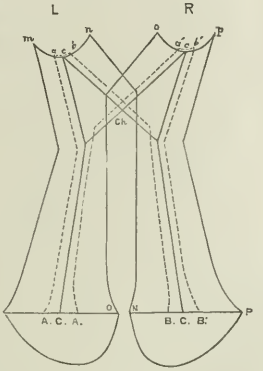


Diagram of the Projective of Retinal Images on the Visual Areas.

a c b and *a' c b'* represent the two retinal images of an observed object. The corresponding half of each image will be projected upon one visual area. Thus *c b* and *c b'* are projected upon *C B* and *C B'*, the central part of the image being projected upon the centre of the visual area, its peripheral parts in the more peripheral parts of the visual area, each point being there doubly represented on each side of, and probably at equal distances from the centre. This double representation appears in consciousness as one, because the corresponding parts are very intimately bound together by associating fibres.

Crossed amblyopia with cerebral lesions.—The above conclusions are not altogether in accordance with the views of two eminent men, both strenuous adherents of the present theories of cerebral localization, Charcot and Ferrier. I refer to the clinical observations of the one, and the physiological experiments of the other. Their observations and results deserve careful attention, because opposing views in such high quarters are likely to throw doubt on the whole subject of localization.

From clinical observations in some cases of hemianæsthesia and amblyopia in one eye Charcot concluded that certain lesions of the internal capsule caused blindness in the opposite eye. Accepting the semidecussation of the optic nerves in the chiasma, he now constructed a new scheme of the cause and final distribution of the optic nerves. According to this scheme those fibres of the optic nerve which do not cross over at the chiasm, but pass into the optic tract of the same side, do cross over and enter into the other side of the brain at some point beyond the corpora quadrigemina. He thus explained that, while lesions of one optic tract would produce hemianopia, lesions of the internal capsule produced a crossed amblyopia.

When it became subsequently known that lesions of the cortex of one hemisphere caused homonymous lateral hemianopia, this scheme being insufficient to explain such conditions, Grasset[1] modified it by a third crossing of the optic nerve-fibres at a point beyond the internal capsule.

The original scheme of Charcot already appeared sufficiently unnatural to cast doubt upon its correctness, but that of Grasset is so very artificial as to rob it of all credence.

In this difficulty we are led to inquire whether Charcot's premises, in the first instance, were correct, whether it is true that lesions in the posterior part of the internal capsule cause blindness in the opposite eye, and that, therefore, all the fibres of one optic nerve pass through the opposite internal capsule.

Many of Charcot's observations were on hysterical cases. These we may altogether ignore, both because the seat of the trouble is unknown and because, in these instances, the visual disturbances are not always of the same character.

Of the cases in which there were cerebral lesions, in some the diagnosis crossed amblyopia doubtless rested upon erroneous observations. In the previous paper we called attention to the fact that it is common for those suffering with hemianopia to state and to believe that they are blind in one eye. They are often much surprised to learn, after a careful examination has been made, that both eyes are alike affected. But there are other cases to which these objections do not apply and which must therefore be examined more carefully.

The first two cases of this kind, with post-mortem results, were reported by Türck.[2] But, inasmuch as there was no evidence that a careful examination of vision was made, these cases may be passed by. In Bernhardt's[3] case there was, with right hemianæsthesia complete blindness in the right eye, but there was, at the same time, concentric narrowing of the field of vision in the left eye.

A patient of Pitres[4] had left hemianæsthesia and hemiplegia and amblyopia in the left eye. But in this case there was also defective vision in the right eye. In both eyes there was concentric contraction of the field of vision. There was also discoloration of both optic nerves.

So in these two cases where post-mortem examination was made (the same seems to be true in similar instances without post-mortem results, whenever careful examination was made) there was not only a crossed amblyopia but also impairment of vision in the eye of the same side; so that these cases do not sustain the original statements of Charcot, or support his scheme of the course of the optic nerve-fibres.

There is only one case, so far as I know, which directly supports this scheme, that is one reported by Mueller.[5] In this case a small lesion was found in the posterior part of the left internal capsule, and, during life, there was on the right side slight paralysis and complete anæsthesia, loss of taste, smell, and hearing in the same side and amblyopia in the right eye. It was expressly stated that vision in the left eye was normal, there being no narrowing of the field of vision.

Wernicke,[6] in reviewing this case, states that the reporter was evidently influenced by Charcot's previous writings, and does not hesitate to pronounce the description of the visual disturbances to be due to faulty observations. This appears to be a very summary way of disposing of what are, apparently, carefully recorded observations, but yet it is not altogether unjustifiable. Charcot has acknowledged that his first observations were incorrect, that visual disturbances could always be detected in the other eye, and the same have been the observations of others in similar instances. But of much

[1] Gazette Hebdomadaire, 1883, p. 205.
[2] Nothnagel: Topische Diagnostic, p. 3[illegible].
[3] Berliner Klin. Wochenschrift, 1875, No. 36.
[4] Wernicke: Gehirnkrankheiten, vol. ii., p. 82.
[5] Berliner Klin. Wochenschrift, 1878, No. 20.
[6] Gehirnkrankheiten, vol. ii., p. 202.

more consequence is the fact that a number of cases have been reported, where, while the post-mortem examination revealed destruction of the posterior part of the internal capsule, visual disturbances of the kind just mentioned (crossed amblyopia) were not found. Such are the cases of Prevost,[1] Pooley,[2] Dreschfeld,[3] Senator and Wernicke,[4] and Vetter.[5] In all of these cases there was hemianæsthesia on the opposite side.

In addition to the above there are other cases of hemianæsthesia where the description of the autopsy leaves us in doubt whether the internal capsule was injured; and others where the symptoms lead us to believe that there was a lesion of the internal capsule; in all of which there was no crossed amblyopia.

These instances are quite sufficient to satisfy us that lesions of the internal capsule which cause loss of general sensation in one half of the body, and may also affect all the special senses, do not directly produce crossed amblyopia, and that Charcot's scheme is not correct. But nevertheless it must be put down as a singular fact that lesions in the neighborhood of the internal capsule should frequently be accompanied by visual disturbances chiefly in the opposite eye. Nothing that has been above said explains their occurrence, but it is to be hoped that this obscure point may be cleared up by careful observations in the future.

Experiments of Ferrier.—We must now speak of the experiments of Ferrier. They are mentioned here, instead of with the other physiological data, because he has recently[6] attempted to bring them into accordance with the above teaching of Charcot.

Ferrier's experiments were made on monkeys; his conclusions (only those relating to vision are here mentioned) are the following:[7] 1. Destruction or bodily removal of one or both occipital lobes almost to the parieto-occipital fissure produces no discernible disturbance of vision. 2. Complete destruction of one angular gyrus produces blindness in the opposite eye, which is of only a few hours' duration. If after a few weeks the second angular gyrus is destroyed, there is only very slight or transient visual disturbance. But if both angular gyri are destroyed at the same time, there is total blindness in both eyes of a few days' duration. 3. Destruction of the occipital lobe and angular gyrus on one side produces homonymous lateral hemianopia. But after a week or more there are evidences of vision on both sides. 4. Destruction of both occipital lobes and both angular gyri causes total and, apparently, permanent blindness, but the presence of one angular gyrus or one occipital lobe is sufficient for vision in both eyes.

Ferrier supposes that each angular gyrus is connected with the central portion of both retinæ, while each occipital lobe is in relation with the corresponding halves of both retinæ. He believes that crossed amblyopia attends lesions of the internal capsule, because, in such instances, those fibres are destroyed which pass from the angular gyrus to the opposite eye. How unsatisfactory as well as arbitrary are these conclusions it is scarcely necessary to mention.

The above experimental results are very puzzling, and seem to be altogether at variance with what we have been taught by other physiologists, as well as with what we have learned from pathological observations on man, for instance, his observation that destruction of an entire visual area produces only transient disturbance, and clinical observations of permanent hemianopia following destruction of one visual area. It seems much easier to believe that the apparent disappearance of visual disturbances in Ferrier's monkeys was due to parts of the visual area (gray matter of the sulci, on the median surface of the brain, etc.) being retained, and to the extreme alertness and sagacity of those animals.

[1] Wilbrand: Ueber Hemianopsie, p. 133. [2] Archiv. f. Ophth., vol. v., p. 148. [3] Brain, vol. iv., p. 543. [4] Gehirnkrankheiten, vol. ii., p. 70. [5] Deut. Achiv. f. Klin. Med., 1883, p. 507. [6] Brain, vol. iii., p. 467. [7] Ibid., p. 420.

There are two of Ferrier's statements which cannot be so summarily treated, and which will, perhaps, require future and more careful observations for a positive answer; these are, that the visual areas include more than the occipital lobes (also the angular gyri), and that each visual area is in relation with the central part of both retinæ.

Luciani and Tamburini[1] also include the angular gyrus in the visual area, but, like Munk, they believe each visual area to be in relation with only one-half of both retinæ. Munk[2] attributes the visual disturbances obtained by these experimenters after destruction of the angular gyrus to direct involvement of the optic radiations, which, according to Wernicke, pass immediately beneath the angular gyrus.

Observations on man do not oppose Ferrier's views, for the disease in all instances was too extensive to say that the symptoms were produced by involvement of the occipital lobe alone.

The second proposition already noted, that each visual area is in relation with the central part of both retinæ, seems to find some support in clinical observations. We have mentioned above the clinical observations which led us to conclude that each visual area is in relation with one-half or almost one-half of both retinæ. The statement was thus modified for several reasons. Though several cases are recorded where the hemianopia reached to the point of fixation, such observations should be received in a guarded manner, for it is very difficult to mark out the exact limits of vision. In a case of right hemianopia, reported by myself,[3] a skilful specialist stated that the hemianopia reached to the point of fixation, though in several very careful examinations made by myself, with the assistance of a medical friend, a very slight curving of the dividing line toward the affected side was positively determined. Besides, there are a number of cases with lesions of the occipital lobe where the hemianopia did not reach to the point of fixation. In one of them, that of Hosch,[4] apparently the whole of one visual area was destroyed. In others, it is true, an entire visual area did not appear to be destroyed, so that we might thus account for the visual defect on one side not being complete. Yet it is a striking fact that, in such instances, just the central part of the field was retained.

The Legal Enforcement of Study at Home.—A novel suit, involving health questions, has recently been decided in one of the English Appellate Courts. A teacher in one of the public schools prescribed certain lessons which were to be learned at home, and when these were not satisfactorily committed to memory a difficulty arose between the teacher and scholar, which is not fully detailed, but which gave rise to the charge of assault and battery against the teacher. The determination of the charge of assault does not appear, but the court where the case was originally tried, and the Appellate Court, both decided that "home lessons set by teachers cannot be enforced." This decision seems to hold that scholars cannot be held responsible for the learning of lessons at any other place than the school-room. It can hardly prevent, however, teachers from giving lessons of such length as to require study out of school hours, and if they are not learned the scholar's standing will necessarily be lowered. Such a result will, of course, modify largely the practical results of the decision. The attention of parents and teachers, here, as well as in England, cannot be too emphatically called to the question whether the requirements of home study, directly or indirectly made, are not in general too exacting for the proper development of the health of children.

[1] Cited by Ferrier and Munk. [2] Ueber die Functionen der Grosshirnrinde, p. 125. [3] Cincinnati Lancet and Clinic, April 7, 1883. [4] Zehnder's Monatsblatt, 1878, p. 285.

HYDROCHLORATE OF COCAINE—EXPERIMENTS AND APPLICATION.

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As soon as I had read the very remarkable communication on cocaine, by Dr. H. D. Noyes, in THE MEDICAL RECORD, October 11, 1884, p. 417, I procured specimens of the new remedy from different sources—Mr. F. W. Foucar, New York; Dr. E. R. Squibb, Brooklyn; and Messrs. Eimer & Amend, New York—and tried its action on myself, some members of my family, and a number of patients. Since that time some short communications on the same remedy have appeared by Drs. C. R. Agnew, W. O. Moore, and J. L. Minor (THE MEDICAL RECORD, October 18, 1884, pp. 438, 439). My observations substantially confirm the statements of these gentlemen. The novelty and importance of the subject may excuse the hasty publication of some experiments and observations which I will describe without much comment as they have suggested and presented themselves to me. As only Dr. Moore mentions something about the substance itself, I looked up, in the desire for further information, some books on pharmaceutical chemistry. The works which I have consulted are: "The U. S. Dispensatory," thirteenth edition, 1870, p. 1591; the same, fifteenth edition, 1883, pp. 563–565; and through the kindness of Messrs. Eimer & Amend, Fehling's "Handwörterbuch der Chemie," 1875, vol. ii., pp. 752, 753, and Hager's "Handbuch der Pharmaceutischen Praxis," 1876, First Part, pp. 903–905. From these books I extract the following pharmacological notes, which may not be without interest.

Cocaine is the alkaloid of the leaves of erythroxylon coca (Lamarck), a shrub growing wild and extensively cultivated in South America, especially in Peru and Bolivia. The leaves resemble those of Chinese tea, and their action is similar to that of tea and coffee. The alkaloid was first isolated from them in 1855 by Gardeke, who gave it the name erythroxyline; but Dr. A. Niemann, of Goslar, Germany, was the first to thoroughly investigate the leaves in 1860. He gave the alkaloid the name cocaine. Lossen, who followed in his footsteps, analyzed it and expressed its composition by the following formula: $C_{17}H_{21}NO_4$. "It acts upon the lower animals much as does theine. It tetanizes frogs, or in overwhelming doses paralyzes the sensory nerves and the posterior columns. Rabbits and dogs are killed by it through paralysis of the respiratory centres. In proper doses it elevates arterial pressure by an action upon the vaso-motor centres and the cardiac-motor system."

"As a nerve-stimulant, coca has been used immemorially by the Peruvian and Bolivian natives. Its sustaining powers have been strongly confirmed by various observers both in this country and in Europe" (U. S. Disp.).

Lossen found in the best quality of coca-leaf 0.04 per cent. of cocaine; inferior material yielded only 0.016 per cent. It dissolves in 704 parts of water, but easily in alcohol, ether, and diluted acids. Its salts are soluble in alcohol, not in ether. They have a bitter taste, and cause in the tongue a transient feeling of numbness at the place of contact (Fehling).

"The coca-leaves have been recommended for almost all diseases, but the therapeutic results have proved unsatisfactory and the remedy has become obsolete. The action of cocaine is very much like that of atropine, with the difference that it does not dilate the pupil. . . . Extractum cocæ is prepared like extractum absinthii. It is said to have a dilating effect on the pupil" (Hager).

Dr. H. D. Noyes states in his communication (MEDICAL RECORD, p. 417, middle of first column): "The solution [of muriate of cocaine, two per cent.] caused no irritation of any kind, nor did it at all influence the pupil."

EXPERIMENTS WITH COCAINE ON THE EYE.—In my first experiments with a two per cent. solution upon patients during various operations I noticed no dilatation of the pupil, but trying it afterward on a patient with ocular neuralgia, and watching it longer, the mydriatic effect of the drug was manifest. The same with another patient in whom I slit a canaliculus and opened the distended lachrymal sac. Relying on Dr. Noyes' assertion and my previous observations—I had at that time not read the contradicting statements of Hager—I suspected that I had contaminated my supply of cocaine with atropine by using a dropper which had been taken from a bottle formerly containing duboisine, though I had carefully cleansed the dropper and used it in six instances without noticing mydriasis. I procured fresh supplies of cocaine in new glasses, provided with droppers that had never been used. This I used upon myself and four members of my family, watching it a whole afternoon and evening. The mydriatic effect of cocaine of a two per cent. as well as of a four per cent. solution was positive and pronounced in all. These *experiments upon myself and four other healthy persons* need not be described *in extenso*. The following may suffice:

The instillation of a two or four per cent. solution of hydrochlorate of cocaine into healthy eyes *produces no pain, nor any discomfort*. During and after its action the conjunctiva does not change its aspect; it is neither swollen nor congested. The appearance of the fundus oculi, examined ophthalmoscopically, likewise remains unchanged. The same holds with regard to the movements of the eyeball. If there is any change in the *tension* of the globe, of which I could not positively convince myself, it is rather toward a diminution than toward an increase.

The *diminution of sensibility* in the cornea and conjunctiva varies in degree in different individuals. In most cases it becomes manifest as early as three minutes after the first instillation, increases for ten to twenty minutes, then decreases, and is over in about half an hour. When another instillation is made, from ten to twenty minutes after the first, the anæsthesia is more intense, on superficial touching mostly absolute, and lasts longer. In an hour after the first instillation it becomes very feeble, and in an hour and a half it disappears.

The *pupil begins to dilate* ten to twenty minutes after the instillation, increases slowly, becomes in some persons as large as with atropia in about thirty to forty-five minutes, remains stationary for about thirty minutes, and then slowly disappears. The last trace had disappeared on the next day only.

The *range of accommodation is shortened* by moving of the near point from the eye, the far point not being appreciably influenced. The shortening of the range of accommodation was limited and differed somewhat in different observers: in myself it was equivalent to $\frac{1}{3.6}$ (1 D); in my son, fifteen years of age, about the same; in Mrs. K——, it was more. Cocaine, therefore, affects the accommodation like the mydriatics. It reduces, but does not paralyze it. It may, therefore, be preferable to other mydriatics if we want to dilate the pupil for ophthalmoscopic examinations of the interior of the eye, but it will probably not be powerful enough for determinations of refraction. It is a mydriatic which, even in producing a maximum dilatation of the pupil, takes away only a fraction of the power of accommodation. In Mrs. K——'s and my own eye astigmatism manifested itself very conspicuously; the letters appeared to slant from left to right; the left eye of both of us was "cocainized." With her the slanting was more perceptible in near vision, with me in distant vision. The letter N slanted about fifteen degrees to the right, and was turned straight by a $+ \frac{1}{7.5}$c. ax. 110°, also by a $- \frac{1}{9.5}$c. ax. 15° or 20°, the same with a $+ \frac{1}{11.4}$c. 110° ⊃ $- \frac{1}{11.4}$c. 20°.

The accommodative power was restored much sooner than the normal size of the pupil. In one and one-fourth or one and one-half hour we could read again as easily as before, though our pupils were still considerably enlarged.

Cauterization of a "cocainized" conjunctiva.—The conjunctiva of my right eye was a little congested, and at 10.30 P.M., while writing this communication, I dropped a drop of a four per cent. solution of hydrochlorate of cocaine on the inner surface of the lower lid. Fifteen minutes later I noticed that this inner surface had become pale, paler than that of the left eye, which had been the paler before. I dropped another drop in, holding my head back so that the whole conjunctiva was moistened by it. Then I painted, before a looking-glass, a good-sized camel's-hair brushful of a two per cent. solution (gr. x. ad ʒ j.) of nitrate of silver into the eye, the lower lid being everted. I left the liquid in place about twenty seconds, then it began slightly to smart, whereas immediately after the application I only felt the cold, no pain. I washed the nitrate of silver away with ordinary water, and put another drop of cocaine in. This relieved the smart for five minutes, then it returned, but very slightly; a serous liquid ran from my right nostril, just as it does when a stronger solution of nitrate of silver is put in the eye in the ordinary way. I instilled another drop of cocaine and continued writing. In a quarter of an hour the eye felt hot and somewhat painful. The conjunctiva of the lower lid was moderately, that of the adjacent scleral conjunctiva slightly, red, and along the whole lower fornix lay a white streak of mucus. The cornea and upper scleral and palpebral conjunctiva were white as if nothing had been done. The pupil was wide, and the accommodation somewhat weakened, not so much as to make writing unpleasant, though the other eye had been "cocainized" in the afternoon of the same day.

EXPERIMENTS ON THE EFFECT OF COCAINE ON OTHER MUCOUS MEMBRANES: 1. *The ear.*—I have made only one experiment in this locality. It was successful; see later, Case VIII. I do not doubt that the remedy will find here a large field of application, both to allay pain and to render the parts insensible during operations in this exceedingly sensitive cavity.

2. *The mouth.*—I can confirm the former observations that the tongue and the soft palate become numb. I sprayed and brushed my soft palate; in ten minutes I could pass instruments over it without pain or reflex phenomena, reaching, etc. I brushed a four per cent. solution over the right half of my tongue from the tip to the palate, held the tongue depressed with my finger and immovable as long as I could endure it. In seven minutes I repeated the manipulation; five minutes later the right side of the tongue and corresponding lip felt numb. Gentle touching was not perceived, but quite well on the other side. Then I put, with a fine brush, some powdered sugar on the insensible parts, successively from the tip to the neighborhood of the palate. It was not perceived, whereas when put in the same way on the corresponding places of the other half of the tongue, it was at once tasted. The same was the case when common salt and a one per cent. solution of sulphate of quinine were placed on the tongue. In half an hour all was normal again. Conclusion: *Cocaine temporarily and locally destroys not only the sensibility of the tongue and pharynx, but also the faculty of taste.* In the endeavor to suspend the sense of taste altogether, I sprayed my mouth and palate. The taste was much reduced, but not abolished, evidently because the remedy in this experiment had not sufficiently acted on all the portions of surface from which impressions of taste are received.

3. *The nose.*—I brushed and sprayed the nose to test the action of the new remedy on the organ of smell. The experiments required a good deal of time and material before they were successful. The lower parts of the nose soon had a numb feeling and were insensible to the touch, but the power of smell was preserved. Bearing in mind that olfaction is the function of the upper nasal passages, the recesses of which are very difficult of access, I bent my head down so as to make the vertex its lowest part, and introduced the bent nozzle of a Richardson atomizer in such a way that the spray was directed from the lower to the middle and upper nasal passages, and the liquid flowed also in the same direction. This manœuvre had to be repeated three times before the faculty of smell was destroyed. Perfumes of rose and heliotrope were not perceived. Tincture of iodine, concentrated nitric acid, etc., produced no peculiar sensation, whereas on the other side they felt very unpleasant and produced coughing. *Cocaine*, therefore, *temporarily renders the mucous membrane of the nose insensible and destroys the sense of smell.* In less than half an hour the whole effect of the remedy had vanished.

4. *The larynx and trachea.*—I am just suffering from an attack of acute bronchitis, with fits of troublesome coughing in the morning and evening. When one of these fits came in the evening, I sprayed my larynx with cocaine and inhaled it as well as I could by means of a Richardson apparatus. The irritation was at once allayed, and soon subsided. I had no cough, but half an hour later I expectorated, free from irritation, a large, compact, muco-purulent sputum. If this experiment should be confirmed by others, and the effect be the same or similar, cocaine will prove a great boon to patients with pulmonary difficulties. The perfected methods of introducing medicated substances by means of the ingenious apparatuses of Dr. Sass would relieve the distress of coughing and its prejudicial consequences. I may add, however, that the Richardson apparatus, which seems inadequate for this purpose, relieved me only partially in a second, and not at all in a third attack during the night.

5. *The urethra.*—My urethra is very sensitive to the introduction of instruments. I injected, by means of an Eustachian catheter and a balloon, a four per cent. solution of cocaine, and held it in for a few minutes. In ten minutes the glans had become pale and insensible to the touch. I repeated the injection. Seven minutes later I introduced a catheter and other instruments into the urethra. I did not feel them at all as far as 3″; when pushed farther I felt them very unpleasantly painful. Evidently the cocaine had not penetrated more deeply. Before the injection of cocaine I felt the instruments very keenly from the beginning of the urethra. To test the loss of sensibility of the cocainized urethra in another direction, I injected a one per cent. solution (gr. v. ad ʒ j.) of arg. nitr. into the anterior part by means of an Anel's syringe, introduced as far as 1½″. I had no sensation from it at all. In about thirty seconds I passed water, which caused a slight burning, disappearing in about a minute. Since that time I have not felt anything from the treatment of my urethra. This experiment shows, and I feel convinced, that cocaine will prove most beneficial in uro-genital surgery. It not only destroys the sensibility of the parts, and therefore admits of the easy performance of many surgical procedures, but by being painless these procedures will not incite reflex phenomena, spasm, and the like.

6. *The rectum.*—For the sake of completeness I injected also cocaine into the rectum. The sensibility, which was not great anyhow, was reduced.

In concluding this communication I will describe the

APPLICATION OF COCAINE IN DISEASES OF THE EYE,

such as opportunities have presented themselves to me thus far.

CASE I.—A young lady, suffering from convergent strabismus, had, October 15, 1884, two drops of a two per cent. solution of hydrochlorate of cocaine, just obtained from Mr. Foucar, dropped into her eye at 4 P.M., before the students of the New York Ophthalmic and Aural Institute. Three minutes later the sensibility of the cornea, tested with tissue paper and blunt probes, was unmistakably diminished. Ten minutes after the first application, when the sensibility of the cornea and conjunctiva was greatly reduced, but not abolished, two drops more were instilled. Five minutes later the anæsthesia was complete, when the cornea and conjunctiva were

gently touched, but not when the squinthook was passed high under the upper lid. Twenty minutes after the first instillation the wire speculum was inserted, the conjunctiva grasped with forceps, cut with scissors, the hook introduced, the tendon divided with scissors, and the conjunctival wound closed with a suture. All this was felt as pain by the patient, yet not very keenly. The sensibility was not abolished, but appeared blunted.

Case II.—October 16, 1884: I instilled two drops of the above solution into the eye of a lady who had a cinder in the centre of the cornea. In ten minutes the cornea was anæsthetic. I removed the cinder by means of a delicate gouge, with very little, yet not without, pain. The removal was easy.

Case III.—October 16th: The same solution instilled into the eye of a man having a pterygium. Ten minutes later, instillation repeated. The cornea and conjunctiva became insensible. During the operation—transplantation into the lower fornix and covering the defect with the adjacent conjunctiva by a stitch—the patient manifested about as much pain as this operation usually causes when performed without an anæsthetic.

The anæsthesia in these three cases disappeared almost immediately after the operation.

Seeing that the effect of the new anæsthetic in these three operations had not come up to my expectation, nor to what was claimed for it, I asked Dr. E. R. Squibb whether he could furnish me a two per cent. solution of the remedy. He sent me a four per cent. solution, remarking in a letter that the two per cent. solution had been extensively tried by Dr. C. S. Bull, and proved only partially satisfactory. He had prepared for Dr. Bull, at his suggestion, a four per cent.

Case IV.—Of this solution I instilled, on October 17th, at the New York Ophthalmic and Aural Institute, in the presence of the students, a few drops into the eye of a cataract patient, aged sixty-eight. In twenty-five minutes, during which time he had held his eyes closed, there was complete anæsthesia of the cornea and conjunctiva. I instilled a few drops more. Five minutes later I performed the extraction of cataract in the usual manner, asking the patient at every step whether he felt any pain. Only when the iris was drawn out and cut he said that it hurt him. The corneal section gave him no pain. The expulsion of the lens, which was done by pressure with a spoon on the lower segment of the cornea, required more force than usual, though the section was perfectly sufficient and the capsule not thickened. The eye appeared inelastic, so that the expulsive force requisite had to be imparted by outward pressure. The cleansing of the wound, the stroking back of the iris out of the cornea, and the adjustment of the flap with a spatula were not felt at all. When the bandage was applied the parts were still insensible, but free from all irritation. The patient had felt no pain, except when the iris was seized and cut; he laughed during the whole performance, and when it was finished he exclaimed, "What! is that all? I have scarcely felt anything." He had some pain in the first thirty-six hours, but no inflammatory irritation.

Case V.—October 18th: Mr. B——, aged thirty. Cinder in cornea, surrounded by a white ring, circumcorneal injection marked; since yesterday. Three drops of four per cent. solution. Removal twenty minutes later. Cornea insensible. The digging and scraping caused no rolling of the ball, no winking with the lids, no pain. Even when I held only the lower lid down and left the upper free, the manipulation caused no closure of the lids.

Cases VI. and VII.—October 18th: Old *trachoma*. Insensibility of cornea and conjunctiva; touched with sulphate of copper. No pain, no irritation, scarcely any increased congestion after the application. No discomfort as when touched before.

Case VIII.—October 18th: *Polypi auris* after removal of exostosis; very painful. The sensibility in scraping them out was decidedly diminished in the superficial layers, not in the depth after two instillations of cocaine.

Case IX.—October 19th: Mrs. N——, aged fifty-six. Conjunctivitis of both eyes, *tumor sacci lacrymalis* of the left. Four per cent. cocaine, six drops in conjunctival sac and on lachrymal points; ten minutes later cornea and conjunctiva anæsthetic, pupil slightly dilated. Tension of globe the same. The introduction of Weber's knife through one-half of the canaliculus is not felt, the pushing forward into the sac and slitting the inner wall of the sac, and passing a thick probe into the nose, are felt painful, but it seems less than usual.

October 19, 1884.

THE NEW LOCAL ANÆSTHETIC.

By D. B. ST. JOHN ROOSA, M.D., LL.D.,

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I HAVE been using the chloride of cocoaine, as a local anæsthetic, for the last ten days, in operations upon the eye, and in one case of neuralgia of the tympanum. The preparation employed was a two per cent. solution made by Mr. Foucar. In the first case the internal rectus muscle was divided. The subject was a young woman. She experienced no pain until the muscle was taken up by the hook, and then she cried out rather lustily, but she did not become at all unmanageable. In the second case I divided both external recti and brought forward the internal rectus. The cocoaine was used in this case every five minutes for fifteen or twenty minutes before the operation, and some three or four times during its performance. The patient was a young and healthy man, a clergyman by profession. He said the pain was inconsiderable, and I had no trouble during the operation from his movements. Indeed, he seemed to suffer very little.

On the 20th I extracted a cataractous lens, in its capsule without an iridectomy, while the eye was under the influence of the new local anæsthetic. None of the stages of the operation caused anything but trifling pain. The eye remained steady and tractable to the end of the manipulations, and no accident occurred. The operation was witnessed by Dr. Vosburg, of this city, Dr. G. J. Bull, Dr. Ring, and Dr. Tewksbury. October 21st I divided the internal rectus, and employed the cocaine in the usual way, that is, two drops every five minutes for fifteen or twenty minutes before the operation, and once during it. The patient experienced considerable pain, and said she would take ether the next time.

As intimated above, I have used the drug locally—upon the membrana tympani—in one case of that rare disease, tympanic neuralgia. The patient said the pain was relieved in ten minutes after two instillations. I have used it for the operation of slitting up the canaliculi and probing the nasal duct, but as yet without any alleviation of the pain usually caused. Except in one case, dilatation of the pupil has always been produced in my cases, but no other unpleasant symptom.

Since writing the above I have performed two operations upon the eye, while under the influence of the muriate of cocoaine, with the most satisfactory results. In these cases a two per cent. solution was used, but it was instilled three to four drops at a time, every three minutes for fifteen minutes. In one of these last cases I divided the internal rectus of a boy of twelve years. He declared that the operation did not cause him greater pain than was produced by pinching the skin of his hand. The last case was one of division of both the external recti muscles in a man of about thirty-four years of age. He declared that the pain was of no consequence whatever, and talked freely with me while I was engaged upon his eye.

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A PLEA FOR THE COUNTRY DOCTOR.

THE best elements of our character are always brought out by opposition. Environment determines many points of excellence which cannot be developed by any other means. It applies to the doctor as well as to others of the *genus homo*. The rural practitioner especially is full of controlling surroundings. If he gets the better of them he is so much more of a man. Every one who knows him sympathizes with him in his every-day fight, and credits him with his well-earned successes. The letter in another column refreshes a picture which is full of cold shadows and rugged outline. The central figure is the country doctor and his horse struggling through the deep trough of a muddy road, with a background of bleak hill, and trees bare-poled to meet the whistling wind. No fancy sketch, as he can tell us, but full of reality to thousands of fellow-workers. Hardly appreciated, however, by the metropolitan brother in his cushioned coupé, trundling over Macadamized avenues to sick millionaires.

But after all, taking ordinary chances, we would be inclined to side with the country doctor in any emergency occurring in general practice. A man who can extricate his horse from a snow-drift on a dark road may not be lacking in resources to dislodge an impacted fœtal head, cut the bridle of a strangulated hernia, or make a new path for a bean in the trachea. That he is accustomed to shoulder responsibility hardly tells against him in his general results. His resources widen with his opportunities, and when he makes his own path up the mountain he can the better appreciate the broadened view which he gains. If he has to swim without corks he can float with the more confidence in the deeper waters.

There is more of an education for a doctor than is comprised in the dosage of pills or the action of powders, and the country doctor gets it very often in his daily contact with man and nature. Insensibly he strikes a balance between the capabilities of the one and the power of the other. Matter-of-fact, it is true, but practical always. He may not have time to look after the countless micrococci that fill the scientific air, but he takes care that they do not obscure the view of the end of his road. His destination must be to cure his patient. If he fails, his good friends in and out of the profession will know it. Consequently he must be the general practitioner *par excellence*, as ready to brighten the headlights as to handle the tiller.

The type of the general practitioner is the self-reliant man on the dark country highway, whose every instinct teaches him to keep the road, whether it be going to a patient or at a patient.

It is truthfully said that he cannot call for help always; therefore he helps himself. It is not so much the instrument as the brains behind it. A man of sound practical sense may treat a fractured thigh sometimes better in the backwoods with a forked stick and piece of blanket than can another with an improved "Buck's extension" in a metropolitan hospital. It is the difference in the man wherever he is. The doctor in the country has the best of it because he has more chance to develop himself, and when he does it he need not envy the city man who steadies his professional standing by fastening intellectual guy-ropes to the bell-call of every neighboring specialist. These dependents are not the backbone of the profession. They can only wriggle their way to patronage while they are riding the ground-swell of the bigger fish. They could not live so well in the country. We are speaking now of the extremes of dependents and independents in their respective types of general practitioners in and out of the cities. If they were to change places specialism in the cities would suffer and general practice in the country would hardly improve. So much for the claims of the progressive, wide-awake, and self-reliant country practitioner.

Our correspondent allows the current of his enthusiastic advocacy of his class to take him slightly beyond his depth when he implies that living in the city is not more expensive than in the country, and that the metropolitan has everything he may wish for. Stop at the hundreds of signs on the avenue highways and side-street byways and ask how it is. To display such a light on a city hill is very different from merely removing the country bushel. The yearly rental of a house on an avenue would buy a country cottage, while the first cost of a coupé would cover the contract for a barn, with possibly a good horse thrown in. Where much is spent much must be earned. The ambitious metropolitan works as hard as the rustic, with hardly as good a show on the grand track. They, in fact, both need rest. Both should take it. It would do the rural gentleman as much good to visit the city in the winter, and exchange his muddy paths for dry pavements and his snow-drifts for closed cars, his patient's bedside for hospital ward and his saddle for the orchestral chair, as it would in summer for the city man to climb the hills, to sail the lakes, cast the fly, or hunt the deer. It is the change which gives the rest—the rustic may study interiors, the metropolitan develop exteriors. Both would be benefited thereby and escape the effects of that continuous drudgery which too often breaks the backbone of a noble aspiration.

THE PATHOLOGY OF LAWN-TENNIS.

FOR two or three years English medical journals have had, now and then, letters about "lawn-tennis arm," "lawn-tennis elbow," and "lawn-tennis leg." Any physician who meets many lawn-tennis players is quite sure to find some who complain of a trouble with the wrist, or forearm, or elbow. These troubles are rather more apt to occur among the beginners, since they are due to the very sudden and often unnecessarily violent muscu-

lar contractions which the too ambitious player makes. They are also rather more frequent among elderly persons. Hence we hear more of them in England, where persons of every age play tennis.

The "lawn-tennis arm," so-called, appears to be generally due to a rupture of the *pronator radii teres*. This is a slender muscle, and the sudden call upon it in using the racket sometimes does it an injury. After long practice, however, the pronating power of this muscle is very much increased and the danger of injury is less. When an accident to it occurs the victim feels pain on flexing or pronating the forearm; there is tenderness, and perhaps swelling and discoloration along its course. Doubtless the muscle in question is not ruptured entirely, but only as to some of its fibres, while coincidently there is a good deal of stretching and perhaps tearing of the fibrous and ligamentous tissues on the inner side of the elbow, near where the muscle arises.

Another form of "lawn-tennis arm" appears to be due to an injury to the musculo-spiral nerve or its posterior interosseous branch. This nerve winds around the outer side of the humerus beneath the triceps muscle and descends between the long supinator of the wrist and the brachialis anticus. In other words, it passes close to, and supplies, two muscles that are brought into powerful action in back-handed strokes. When these strokes are made too suddenly and violently by unseasoned muscles the contractions appear either to injure the extensors and supinators of the arm, tearing some of their fibres, or perhaps the nerve itself is injured by the violent squeezing which it gets. At any rate there is a quietus put upon back-hand strokes for a time.

We have seen tennis players who suffered from weakness of the wrist. The violent flexing of the fingers and wrist has in these cases stretched or torn some fibres of the anterior annular ligament, which holds the flexor tendons down. Sometimes a slight teno-synovitis seems to be set up. A firm rubber band is a great help in these cases.

Tennis players may and do suffer from ordinary sprains of the elbow or shoulder. In these there is nothing distinctive or peculiar.

Besides "tennis arms," we have "tennis legs." For example: A player while serving a ball with a powerful cut-down stroke suddenly felt a sharp pain in the calf of his leg and the leg immediately became powerless. A few days later large black-and-blue spots appeared on the calf. This patient had a "tennis leg." The trouble was caused by a rupture of some of the calf muscles. The English writers assume the affected muscle to be the small and rudimentary plantaris longus. Certainly there is more involved than this in many cases.

The treatment for all the foregoing pathological products of athletic activity is, in the main, rest, massage, and elastic compression. Sometimes the use of elastic bandages, such as Martin's, enables one to use the injured arm very soon. At other times the trouble is more obstinate, and the arm has to be given almost complete rest for a long time. When the nerve is injured, electricity is very useful. A bad tennis leg may require a starch bandage and a high-heeled shoe for a time.

In conclusion, we would say that tennis players need not feel alarmed by this description of the possible accidents in the game. The proportion of tennis arms and tennis legs is extremely small. It may even be questioned if young and perfectly healthy persons can rupture their muscles in using a tennis racket. Certainly such a thing is of rare occurrence. But non-athletes who take up tennis after thirty should be a little careful.

THE NEW YORK STATE MEDICAL SOCIETY.

Circulars have been issued by Dr. B. F. Sherman, President of the New York State Medical Society, requesting that the titles of papers to be read at the next meeting be sent in by the first of December. It is desired that the full list should be published at that time, so that the discussions may be full and exhaustive.

The object of the President is praiseworthy, but he will not attain it by the method alone which he proposes. If the titles of any large proportion of the papers could be obtained so early as December 1st, which is doubtful, members would be very likely to forget them before February. Apart from this, however, every one knows who has attended State meetings that more radical changes must be made in order to secure valuable discussions. At present, there are generally too many papers for the time of the Society. The discussions have to be cut short, instead of being encouraged. Nor is there any systematic attempt to get good discussions. Experience with medical men and medical meetings shows that it is only rarely that good discussions are secured without previously canvassing members and seeing that those who can speak instructively are present and prepared.

It is possible that at the next meeting, with the Code question no longer to vex us, there may be time for the full presentation and consideration of papers. If not, however, some radical change must be made. Sections must be established—a measure of questionable wisdom—or the meetings prolonged, or the number of papers accepted must be more carefully limited.

The practice of urging readers of papers to have printed slips of an abstract for distribution to the members sometimes increases the interest in papers that are long or very technical, and the question of its adoption should be borne in mind by the Business Committee.

SUITS ARISING OVER INJURIES.

The suits arising over injuries incurred in accidents, especially those connected with railroad collisions, often bring up the question of the skill of the attending physician or surgeon, and the railroad companies lay great stress wherever possible upon the alleged incompetence or negligence of the professional attendant. If this defence were allowed to the extent it is sometimes pushed, the poor victim of a collision would be obliged to warrant that the utmost skill had been exercised by the surgeon, or else he could not recover any damages. This is not the rule adopted by the courts, which generally hold that all that can be legally exacted of the sufferer is ordinary care and skill in the choice of an attendant. A recent case in Pennsylvania states this principle, where the injury was a broken arm, and the ruling of the judge was as follows: "There is evidence tending to show that, had this broken arm received ordinary care and ordinary professional skill,

the parts would have united with little or no permanent injury, and on this hypothesis alone appellant insists that the matter of this false joint should have been, at least hypothetically, excluded from the jury. We understand the law on the subject to be that plaintiff cannot hold defendant answerable for any injury caused, even in part, by the fault of plaintiff in failing to use ordinary care or ordinary judgment, or for any injury not resulting from the fault of defendant, but caused by some new intervening cause not incident to the injury caused by defendant's wrong. Thus, in this case, if it be conceded that the false joint, under proper care and skill, would not have resulted from the breaking of the arm alone, but was brought about by the subsequent separation of the parts after they had been properly set, and before nature had formed a firm union, then if this subsequent separation of the parts had been caused by an assault and battery by a stranger, or some foreign cause with which appellant had no connection, and which was not in its nature incident to a broken arm, plainly appellant ought not to be held to answer for the false joint; but if appellee exercised ordinary care to keep the parts together, and used ordinary care in the selection of surgeons and doctors, and nurses, if needed, and employed those of ordinary skill and care in their profession, and still by some unskilful or negligent act of such nurses, or doctors, or surgeons, the parts became separated and the false joint was the result, appellant, if responsible for the breaking of the arm, ought to answer for the injury in the false joint. The appellee, when injured, was bound by law to use ordinary care to render the injury no greater than necessary. It was, therefore, his duty to employ such surgeons and nurses as ordinary prudence in his situation required, and to use ordinary judgment and care in doing so, and to select only such as were of at least ordinary skill and care in their profession. But the law does not make him an insurer in such case that such surgeons, or doctors, or nurses, will be guilty of no negligence, error in judgment, or want of care. The liability to mistakes in curing is incident to a broken arm, and where such mistakes occur (the injured party using ordinary care), the injury resulting from such mistakes is properly regarded as part of the immediate and direct damages resulting from the breaking of the arm."

PALLIATIVE MEASURES IN RUPTURED EXTRA-UTERINE PREGNANCY.

Another woman has passed from health to the grave in a few hours; another home has been made desolate; and another victim to delay and palliative hypodermatics of morphia and brandy-and-water in drachm doses has been added to the list, already too long, of cases that have been lost for want of surgical treatment.

A case has been recently reported, in a Western medical journal, in which the symptoms of rupture of an extra-uterine fœtal sac were complete, and the diagnosis of extra-uterine pregnancy was concurred in by three practitioners, and the following treatment adopted: "Sulphate of morphia in one-sixth-grain doses, hypodermatically, to control the pain, and brandy, both by the mouth and under the skin, as a stimulant. A sinapism over the stomach and bowels assisted in giving some measure of relief." The patient died in sixteen hours and a half. Nothing is said of an attempt to control the hemorrhage, which every one must have known was draining away the woman's life. Nothing is said of a desire to open the abdominal cavity to stop the hemorrhage and remove the foreign body. Is the recorded experience and the teaching of the surgical leaders of the day to go for nothing? Are there any who think that a patient in this situation dies of aught else save hemorrhage, and controllable hemorrhage? If the hemorrhage be not controllable, why do the patients live for sixteen and twenty or thirty hours after the rupture? Are there those in the profession who do not know that the mere exposure of the abdominal cavity to the air will often check a hemorrhage which would otherwise prove fatal in the closed cavity? Surely in these days of great and brilliant triumphs in abdominal surgery, when patients recover after intestinal wounds and resections, when the most desperate "forlorn hopes" recover, one should not hesitate to open the abdomen in a case of this kind, when two or three ligatures and some clean water are all that are required.

There is no palliative measure for a ruptured extra-uterine cyst; there is no expectant treatment; and there is no other way known to medicine by which a woman in this condition can be reasonably expected to survive save by the prompt use of the knife—and there is no reason for thinking that she would die if this be resorted to in time. And until she is practically dead it is never too late to try and save her.

MR. VANDERBILT'S GIFT.

The College of Physicians and Surgeons deserves warm congratulations upon the magnificent gift of half a million dollars which has been so generously made to it by Mr. William H. Vanderbilt. Such a donation is unprecedented in the history of American medical colleges. It places the fortunate institution among the few endowed medical colleges in this country, and will enable it to carry out the efforts at a higher education which it has already shown itself desirous of making.

The medical colleges in this country which, in 1881, had productive funds were the following: Yale Medical College, $29,102; Harvard Medical School, $280,391; Medical Department of University of Pennsylvania, $50,000, and Johns Hopkins Medical School (not yet open). Besides these, the McHarry Medical College, the Howard University Medical School, and the Kansas City Medical College have small endowments; while several others, such as Dartmouth and Bellevue, have had large sums of money presented for specific purposes. A number of Western medical colleges also give tuition free and are supported entirely by the State.

The Faculty of the College of Physicians and Surgeons of New York already has property valued at nearly $200,000. With its recent gift, therefore, it becomes the richest institution of the kind in America. It is announced that the money will be used, in part at least, for the construction of a new building, which will be erected in the northwestern part of the city, in the vicinity of Roosevelt Hospital. Such a move, if made, will be a bold one, since tradition has heretofore located medical instruction upon the east side of the city. By

the enlargement of Roosevelt, the construction of a maternity hospital, and the development of dispensaries, the part of the city referred to could probably, in time, be made another medical centre.

Roosevelt Hospital, however, will meanwhile have to undergo some radical and needed changes in the arrangement of its visiting services. For although it is admirably managed in a way, nevertheless in usefulness to medical and surgical science, and for the purposes of practical instruction, it has been falling behind.

News of the Week.

Muriate of Cocaine in the Operation for Cataract.—The operation for double senile cataract was successfully performed this week at Mount Sinai Hospital, muriate of cocaine being used, and no general anæsthetic. The patient experienced no pain.

A Journalistic Change.—It is announced that *The Therapeutic Gazette* will be moved to Philadelphia, where it will be edited by Professor H. C. Wood and Professor Robert Meade Smith. *The Gazette* will still be published by Mr. George S. Davis, of Detroit, whose liberality and energy have already done so much for it. We welcome Professor Wood back to the field of journalism. His editorship insures to the profession a journal in the interests of scientific pharmacology as well as of practical therapeutics.

The Hospital Saturday and Sunday Association held its first meeting for the fall during the past week. A report was made by the general agent of the Society, Mr. F. J. Cook, in which it was stated that the work was well advanced, and that there was an excellent prospect. There would, in all probability, be a larger collection from the churches than heretofore. The members of additional trade auxiliaries had been brought into the work, having been organized during the summer.

The So-called Gonococcus Normally Present in the Healthy Urethra.—Dr. E. C. Wendt, of New York, writes that with the aid of a suitable instrument he has examined the scrapings from different portions of the healthy male urethra. In every instance these scrapings were found to contain, in greater or less abundance, micrococci morphologically identical with Neisser's so-called gonococci. The inference is obvious. He intends at a later date to publish the detailed results of a large number of observations, which, in conjunction with Dr. C. W. Allen, of New York, he has already made, and is still engaged in making.

Washington Obstetrical and Gynecological Society.—At a regular meeting of the Washington Obstetrical and Gynecological Society, held October 17, 1884, the following officers were elected for the ensuing year: *President*—Samuel C. Busey, M.D.; *Vice-Presidents*—W. W. Johnston, M.D., and J. Taber Johnson, M.D.; *Recording Secretary*—C. H. A. Klineschmidt, M.D.; *Corresponding Secretary*—Samuel S. Adams, M.D.; *Treasurer*—George Byrd Harrison, M.D.

Dr. Domingo Orvananos, the Secretary of the Board of Health of the City of Mexico, has been in this city studying our methods of sanitary administration.

Death of Professor F. A. Ross.—Dr. F. A. Ross, of Mobile, Ala., died October 17th, of apoplexy. He was born in 1821, and was graduated at several institutions of learning, including the University of Virginia and the Pennsylvania Medical College. He served as Surgeon of the Palmetto Regiment during the Mexican war, and during the war of the rebellion was the Medical Director of the Department of the Gulf, under the Confederate Government. He was at one time President of the Mobile Medical Society and of the Alabama Medical Society, and Professor of Therapeutics in the Mobile Medical College.

"Dead Teeth in the Jaws."—Dr. C. E. Nelson writes: "In my communication to you on this subject (October 18, 1884), on page 444 of The Record, I notice two important typographical errors, which I should like corrected. In the second column, line 25 from bottom, for *nominally* read *normally*. In line 8 from bottom, for *than* read *then*."

The New York State Medical Association.—The Fellows and delegates of the New York State Medical Association assemble in this city on the third Tuesday in November next (the 18th). The Association is at present composed of 168 founders, representing 40 out of the 61 counties of the State. Half of the founders come from six counties, New York having 33, Rensselaer County coming next with 14, and King's County last with 7. Sixteen counties have one representative. It has been voted to call the members Fellows. A committee, consisting of Drs. A. Flint, Jr., Van de Warker, and Gouley, has been appointed for the purpose of securing the co-operation of a medical journal in harmony with the objects of the Association. It has been voted that members who are to read papers shall have a synopsis printed for distribution. The main object of the Association is to secure to the profession in New York State representation in the American Medical Association. The question will, therefore, doubtless be raised whether those counties in which medical societies have not changed their old code and which are still entitled to representation can send a double set.

The Report of the French Cholera Commission at Marseilles.—This commission, consisting of seven members, of whom only five acted, viz., MM. Sicard, Taxier, Loucel, Livon, and Chareyre, offers the following conclusions: "1. The cholera is transmissible to the rabbit, as demonstrated by injection into the veins of the blood of a cholera-patient at the algid period. The rabbit died in twenty-four hours, with lesions entirely like those of cholera. 2. By cultivation, this blood after a few hours loses its infectious properties. 3. Injections of choleraic blood in the period of reaction, or a very advanced algid period, produce no effect. 4. The perspiration of a cholera-patient, injected into the veins, does not transmit cholera. 5. The stomachic or intestinal dejections, or the gastro-intestinal contents (this last full of comma-bacilli), may, after filtration, be injected with impunity into the cellular tissue of the peritoneum, the windpipe, the intestines, the rectum, and even into the blood. 6. Comma-bacilli taken from the intestines of a cholera-patient may be introduced into the intestines of a rabbit, and multiply there for more

than eleven days, without producing any choleraic symptoms, and without necropsy revealing the anatomo-pathological lesions characteristic of cholera. 7. There is thus every proof of the non-specificity of the comma-bacillus. We experimented on bacilli taken from the intestine, and with dejections kept from two to twelve days, the results being always negative. Everything also proves that this bacillus does not produce in the intestine toxical ptomaines which would be the cause of poisoning—namely, the lesion of the blood. The inference from more than fifty of these experiments is the non-contagiousness of cholera, which we maintained from the very opening of the discussions. 8. The minute examination made by us of the heart and large venous vessels of cholera-patients enables us to affirm that there is no phlebocarditis in cholera, as alleged by Morgagni and still maintained by many enlightened physicians. 9. Bulbar and medullary lesions, or those of the solar plexus, appear to us to be all secondary lesions. 10. In our opinion, the initial lesion of cholera takes place in the blood. 11. It essentially consists in the softening of the hæmoglobin, which makes some corpuscles lose first their clear shape, the fixity of their form, and the faculty of being indented. Those corpuscles adhere together, lengthen out, stick together, and, in very rapid cases especially, some are seen which are quite abnormal, while others appear quite healthy. 12. The entire loss of elasticity of the corpuscle (which is shown by the preservation of the elliptic form when it has been stretched out) is, in our view, a certain sign of the patient's death. To stretch out a corpuscle, it is merely needful to alter the inclination of a plate on which a sanguineous current has been established in the field of the microscope. The fluid column stops at one point, whereas the rest continues to flow. An elongation of the intermediary corpuscles results, and then a rupture of the column. In the gap thus formed are some scattered corpuscles. If these revert to their primitive form the patient may recover. If they keep the elliptic form, we have seen death follow in every case, even if the patient's symptoms were not serious at the time of the examination of the blood. At the outset, and in the rapid cases, which give the clearest results, corpuscles remaining healthy are seen alongside the unhealthy ones, and assume the shape well known in heaps of money, or maintain their liberty. When currents are created in the field of observation, the columns of healthy, or less unhealthy, corpuscles remain stationary, or nearly so; whereas the unhealthy corpuscles flow between the columns or the stationary masses like fluid lava. This we believe to be the characteristic lesion of cholera. By hourly examination of the blood of cholera-patients the progress of the malady can be mathematically followed. First some corpuscles are unhealthy, then one-third, then half, then two-thirds, and lastly death supervenes. A very important fact in our view is that all the corpuscles are not simultaneously affected. We debar ourselves from substituting a fresh hypothesis for all those we have overthrown. We confine ourselves to saying that we know better than our predecessors what the cholera is not, but we do not know what it is."

The Ambulance Service in New York.—A correspondent of the *British Medical Journal* writes: "Each of the principal hospitals of New York supports one or more ambulances, which may be called by the telegraphic or district messenger systems, and are always accompanied by a surgeon. During the year ending June, 1883, Chambers Street Hospital (2 ambulances) answered 2,124 calls; the New York Hospital (2 ambulances) answered 1,118 calls; Bellevue Hospital (4 ambulances) answered 2,606 calls; Presbyterian Hospital (1 ambulance) answered 500 calls; Roosevelt Hospital (2 ambulances) answered 750 calls; Ninety-ninth Street Hospital (2 ambulances) answered 800 calls; and St. Vincent's Hospital (2 ambulances) answered 1,100 calls—showing that, during the time specified, seven hospitals, supporting fifteen ambulances, answered 9,198 calls."

Death of Dr. Louis A. Dugas.—Dr. Louis Alexander Dugas died at his home in Augusta, Ga., on October 19th. He was born in Washington, Ga., January 3, 1806. Then he pursued a course of study in the medical department of the University of Maryland, from which he graduated in 1827. He passed four years in a study of European medical institutions, and finally settled down to the practice of his profession in Augusta. He united with five other physicians in 1832 in founding the Medical College of Georgia, and accepted the chair of Professor of Surgery. He retained this position until the close of his life. In 1834 he was elected to membership in the Geological Society of France. The University of Georgia conferred the degree of Doctor of Laws upon him in 1869. He held a membership in numerous literary and scientific societies in Georgia, and was President of the Medical Societies of the State and of the City of Augusta respectively, for several years. During the international Medical Congress at Philadelphia in 1876, Dr. Dugas was one of its Vice-Presidents. He became the editor of the *Southern Medical and Surgical Journal* in 1851 and retained the position for seven years.

Bequest to the Massachusetts General Hospital.—The late Francis P. Hurd, of Wakefield, Mass., bequeathed $10,000 to the Massachusetts General Hospital.

Hospitals at Winnepeg.—Dr. Henry H. Chown, of Winnepeg, Manitoba, writes in an unnecessarily indignant tone regarding an item in The Record, which says that Winnepeg having a medical school "is about to start a hospital." Our correspondent says that the hospital which is about to be started is not the first but the third in that city, and that it is doubtful if any college has started with greater hospital advantages than the Manitoba Medical School. We are very glad to learn this, and to correct any misapprehension regarding the educational facilities of Manitoba.

"Lady Medicals."—Such are the honeyed words with which the Englishman refers to the women doctors. *A propos* thereof says one journal: "Although the Medical School for Women in London has been open some eight or nine years, only some score or so of lady doctors have been launched upon mankind, but this limited supply has far exceeded the demand, at least as far as England is concerned. Only about two or three lady doctors, I am told, can earn a living by the private practice of their profession in this country."

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, October 8, 1884.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

DR. T. MITCHELL PRUDDEN presented, in behalf of a candidate, a specimen of *chronic endocarditis.*

CARCINOMA OF THE STOMACH.

DR. SATTERTHWAITE presented the stomach, pancreas, kidneys, and a portion of the lungs, removed from the body of a man fifty-three years of age. He was called on September 7th, in consultation, to see the patient, who had had a hemiplegic attack of moderate character, and from which he recovered within twenty-four hours to such an extent as to be again able to use his right upper and right lower extremities. Attention had been called to the fact that he had been losing strength rapidly for six months, and on further inquiry it was found that he had been losing flesh for two years. Up to about one month previously he had suffered from nothing especially except chronic gastritis with frequent attacks of vomiting and great difficulty in taking food. There was some pain in the epigastric region, but not severe. The urine, lungs, and heart were normal. The epigastric difficulty increased during the last month, but he had not vomited blood; nothing except the material taken. There was no tumor in the epigastric region, although it was thought that some dulness on percussion could be detected. The patient presented a cachectic appearance, and there was progressive emaciation with reduction of weight from 160 to a little more than 100 pounds.

Two months after his first attack of hemiplegia a second attack occurred, in which there was some difficulty in swallowing and speaking, but it largely disappeared, although he never fully recovered his voice or power of swallowing solids. During the last four or five days of his life the patient refused to eat on account of the inability to retain food and of the extreme pain which it produced, and he said that he preferred to starve to death, and he did starve to death.

On opening the abdominal cavity the stomach was found essentially in its normal position. At the pyloric extremity there was a patch of considerable thickening about the size of a silver half-dollar, limited to the anterior side. The pyloric orifice admitted only a lead-pencil of ordinary size. The circular patch of thickening could hardly be appreciated except by the touch. Although the constriction at the pyloric orifice was not great, Dr. Satterthwaite accounted for the gastric symptoms on the ground that the thickened portion of tissue was limited to one side, and was thrown over the orifice at times, acting somewhat like a valve.

The pancreas was infiltrated with small nodules; the mesenteric glands were somewhat enlarged. The liver, the lungs, and the heart were essentially normal. The kidneys were somewhat fatty and slightly enlarged.

The question to be determined was whether or not the thickening at the pyloric extremity of the stomach was due to malignant disease. Dr. Satterthwaite proposed to examine the specimens microscopically, but he preferred to exhibit them to the Society while they were in a fresh condition.

THE PRESIDENT asked how long after taking food the vomiting occurred.

DR. SATTERTHWAITE said from twenty-four to forty-eight hours. The spasmodic efforts during the attacks of vomiting were exceedingly severe, and probably during some of these attacks cerebral hemorrhage was produced sufficient to give rise to the hemiplegia.

DR. JOHN C. PETERS asked if the thickening was confined to the single patch mentioned.

DR. SATTERTHWAITE replied that it was confined to the circular patch which could be felt but not seen, and in reply to another question said that the stomach was not especially enlarged, although we might expect dilatation with obstruction at the pylorus, yet that does not always occur with cancer.

THE PRESIDENT remarked that it would seem, if it were malignant disease, it should have made more progress during the two years it had existed.

DR. SATTERTHWAITE remarked that he had the records of a case in which a nodule at the pyloric orifice of the stomach was felt for two years, and the history of the tumor extended back of that, and at the autopsy it was proved to be cancerous in character.

DR. JOHN C. PETERS thought that the case might prove to be a duplicate of the first case presented to the Society in 1844, one of thickening of the stomach, which was diagnosticated during life as cancer. The patient had many of the symptoms which Dr. Satterthwaite had mentioned, and there was found a hardness in the walls of the stomach without tumor, and after death it was supposed to be cancerous. On examination, however, it was found to be merely a thickening of the cellular tissue. It was regarded as a rare specimen.

THE PRESIDENT remarked that it would be interesting to ascertain whether or not cancer was frequently limited to such a small portion of the stomach.

DR. VAN GIESON said the duration of the disease was a very uncertain factor, because a malignant growth might engraft itself upon chronic gastritis.

DR. W. M. CARPENTER referred to a case in which he found at autopsy a cancerous nodule, about an inch and a quarter in diameter, situated about three inches from the pylorus, upon the posterior surface of the stomach, which had not given rise to symptoms. The patient entered the hospital and died of a disease not referable to the stomach.

DR. SATTERTHWAITE referred to a case in which he made an autopsy and found a tumor as large as an orange, situated in the greater curvature of the stomach, which had discharged by a sinus leading through the abdominal wall, and this sinus had been treated by a surgeon with the result of producing a partial cure. The patient was suddenly attacked with gastric symptoms and died. The tumor was not discovered during life, nor had the patient complained of gastric symptoms other than those which were referable to the sinus which communicated with the growth.

THE PRESIDENT remarked that it was rather the rule than the exception, when the disease was not located in one of the extremities of the stomach, that vomiting and other stomach symptoms did not develop, and that the growth was discovered only at autopsy.

NASO-PHARYNGEAL FIBRO-SARCOMA.

DR. R. P. LINCOLN presented a specimen with the following history (see page 455):

THE PRESIDENT remarked that there was no comparison between the operation described by Dr. Lincoln and that with preliminary tracheotomy, tamponing the pharynx, and removing the upper jaw. There could be no argument against the success obtained in Dr. Lincoln's case.

DR. HOWE thought that it afforded a strong argument against the use of the knife in all of these cases.

THE PRESIDENT remarked that in some cases the wire could not be applied to the base of the tumor so as to grasp it. He had had two such cases, in one of which Dr. Howe assisted at the operation, and in which preliminary tracheotomy was performed, the pharynx tamponed, and the upper jaw removed. It was found that the tumor had prolongations extending up into the skull through the foramen lacerum medius, and from this circumstance he had been enabled to explain the shock which ultimately caused the patient's death. The tumor was extensively attached to the basilar process and to adjoining portions of the base of the skull in various direc-

tions. In that case, however, the application of the wire was found to be impossible.

The second case was one in which there were almost as extensive attachments of the growth, and the operation was followed by the same result, although death did not take place as soon as in the first case. He also had another patient who was begging for a similar operation, a man twenty-two years of age, and concerning whom he had promised himself the pleasure of a consultation with Dr. Lincoln as to the feasibility of the use of the galvano-cautery. The great trouble with most of these cases was that they did not reach the general surgeon until they were beyond all hope of removal by the wire, and they were also in a very unfavorable general condition for the radical operation. There could, therefore, be no argument against success in such cases, however obtained.

Dr. Howe suggested that, even in the bad cases spoken of, before any attempt was made to remove the tumor by the knife, efforts might be made to destroy it piecemeal by means of the wire. He could not see why it could not be done there as well as elsewhere.

The President remarked that the difficulty consisted in the inability to get hold of pieces of sufficient size. Within the last year he had had a patient under observation, and had sent him to a gentleman well skilled in this method of operating, who succeeded in removing small pieces, but left the patient in such a deplorable condition from subsequent inflammation that he declined to have the operations repeated.

Dr. Satterthwaite said that it seemed to him that Dr. Lincoln's operation was an extremely brilliant one, and was one which required and obtained a great deal of manual dexterity in preventing the wire from twisting, and also in adjusting it to the base of the tumor. Dr. Lincoln passed the wire all the way down to the basilar process and removed the entire growth at one operation. It had been said by one distinguished throat specialist who saw the case that the operation could not be performed, and that removal of the upper jaw would be necessary. Dr. Satterthwaite thought that fact should be borne in mind in estimating the brilliancy and feasibility of the operation; and also the additional fact should be recollected that this was only one of three or four cases in which Dr. Lincoln had removed large naso-pharyngeal polypi, and in none of them had the disease returned.

In his hospital notes he had not found the records of a case in which the disease had not returned and the patients had been subject to hemorrhages, etc. But the patient upon whom Dr. Lincoln operated and removed the specimen presented had gained flesh remarkably, and had not had any hemorrhages whatever. In these cases the galvano-cautery is peculiarly successful because it arrests hemorrhage and destroys the tissue to such an extent that if the growth return, hemorrhage is not likely to ensue from the use of the wire. He thought too much could not be said in favor of this mode of operating, and he would be pleased to hear from Dr. Lincoln as to what his success had been.

Dr. Lincoln said he had operated in six cases. Two of the patients were still under treatment. Of the other four cases, one was operated upon in 1874, one in 1875, one in 1879, and one in 1880. He thought there was no possibility of recurrence in any of these four cases. He had not had any fatal cases.

With regard to the operation, he would refer to the one which he performed in 1875. It seemed to be as extreme a case as could possibly exist. The patient had been operated upon by Dr. Willard Parker, and also by Dr. Lutkins, of Jersey City, who sent him to Dr. Lincoln. The patient was a boy ten years of age, who, when he saw him, weighed sixty-eight pounds, and death seemed inevitable. The growth had caused the right eye to protrude a great deal, the right nostril was very broad at the base, the mouth was so filled that the uvula was carried orward to an extent that if the incisor teeth could have been closed they would have cut it off, and in general condition he was reduced to *extremis*. Dr. Lincoln made a preliminary treatment by electrolysis, with some twenty or twenty-five applications, and the result was arrest of the growth, preventing hemorrhages, and reducing the mass to such a size as to give the patient a chance to recuperate preparatory for the radical operation. At the time he operated, in 1876, the boy weighed one hundred and three pounds, and the tumor had largely disappeared from the mouth. He removed the growth in the manner already described, and without any hemorrhage. He made six applications with the galvano-cautery to the stump at invervals of one or two weeks. There had been no return of the disease. There were extensive adhesions of the growth to the back of the pharynx and the sides of the nostrils.

In another case there were prolongations of the growth to such an extent that the tumor appeared under the cheek as large as a pullet's egg. This patient was operated upon in the same manner, was put upon the same after treatment. The result was the entire disappearance of the prolongations of the growth in the face, and the patient is now perfectly well. The other cases were similar, but not so pronounced.

Dr. Van Gieson asked if in the case operated upon in 1876, where the tumor protruded so extensively into the mouth, if Dr. Lincoln was able to remove the whole of the mass through the mouth without dividing it.

Dr. Lincoln answered that the entire tumor was removed through the mouth.

The President remarked that he was so favorably impressed with this operation that he should not try any other without first attempting to use the wire, and further, that no small degree of credit was due to Dr. Lincoln for demonstrating this comparatively simple and yet radical operation.

FIBRO-CYST OF THE UTERUS.

Dr. T. Mitchell Prudden presented a specimen for which he was indebted to the courtesy of Dr. C. C. Stockard, of Columbus, Miss. The case has already been reported. (See The Medical Record, August 16, 1884.)

Dr. Prudden had submitted the growth to microscopical examination; found it to be composed of smooth muscular and fibrous tissue, presenting very much the appearance seen in the ordinary fibromyomata of the uterus. There was no distinct cellular lining of the cavity of the tumor. He presented the specimen because of its size and because it was interesting as showing one of the modes of formation of cysts, namely, softening, and perhaps dilatation of the original solid tumor by the accumulation of fluid and disintegration of tissue. The entire weight of the mass, as reported by Dr. Stockard, was one hundred and thirty-five pounds.

Dr. Ferguson remarked that he had just come from a post-mortem examination in which he removed a tumor weighing more than the one presented. It was, however, an ovarian tumor.

Dr. Castle referred to the case of a patient who died in Bellevue Hospital, where, owing to the failure of taking proper precautions, the woman by some of her movements caused the tumor to fall out of bed and it dragged the patient with it.

Dr. Wilcox asked with regard to the frequency of the occurrence of uterine fibro-cysts in the negress.

Dr. Prudden said that large tumors like this were rare, but that small tumors were not at all infrequent.

Dr. Castle remarked that it had been said to be the rule rather than the exception to find fibrous tumors of the uterus in the negress.

INTESTINAL OBSTRUCTION—UTERINE FIBROIDS.

Dr. C. W. Knight presented a specimen with the following history: A. B——, colored, unmarried, thirty-five years of age, has always been constipated, and has had frequent attacks of severe "colic" (?); has never had

occasion to call a doctor for these or for other illness. Bowels have not moved for nearly three weeks. Five days ago began to take purgatives, and has used them since in great variety, without effect. Stomach became swollen, and three days ago vomiting began. Called a physician, who gave a cathartic. No constitutional disturbance was noticed, although there was intense thirst. Vomiting became more frequent; the vomited matter was fluid and had a greenish color. During the last twelve hours of life "several quarts" were vomited, the abdomen became enormously distended, and respiration was greatly impeded. Death took place suddenly as the patient was attempting to rise from bed. The patient had been walking about her room nearly all day, making no complaint of pain, but suffering great discomfort from the vomiting and the distention of the abdomen. Enemata of various kinds were resorted to, but they brought away only a few scybalous masses. On opening the abdomen the small intestines, intensely congested and distended, were exposed. The colon was found nearly empty. About five inches from the cæcum the ileum was found constricted by a band of tissue running between two uterine fibroids. The loop of intestine was five to six inches in length, was almost black, and was distended with gas; it was easily emptied and pushed back through the constricting band. There was no ulceration, but the points of constriction were indicated by deep furrows in the wall of the intestine. The uterine fibroids, mural and sub-peritoneal, four or five in number, vary in size from that of a hickory-nut to that of a small orange. They and the cæcum and the first five or six inches of the ileum were matted together by old peritonitis. There was no ulceration of the intestine, and recent peritonitis was limited to the region of the strangulation.

The Society then went into executive session.

THE NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, October 16, 1884.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

DR. HARRY MARION SIMS presented a

BRONZE BUST OF THE LATE J. MARION SIMS, M.D., LL.D.,

copied from a marble bust made by Dubois, the celebrated French sculptor. It is a most life-like figure.

THE PRESIDENT, in behalf of the Academy, accepted the gift with appropriate remarks.

DR. WM. T. WHITE offered a resolution tendering the thanks of the Academy to the donor for his beautiful and highly acceptable gift.

DR. JOHN SCOTT, of San Francisco, was introduced to the Academy and invited to a seat upon the platform.

DR. WM. H. DRAPER then delivered a

MEMOIR OF THE LATE WILLARD PARKER, M.D., LL.D.,

in which he paid a worthy tribute to the distinguished citizen, the skilful surgeon, and the upright man whose "face was always set before the light."

THE THERAPEUTICAL EFFECTS OF THE INTERNAL ADMINISTRATION OF HOT WATER IN THE TREATMENT OF NERVOUS DISEASES.

DR. A. L. RANNEY read a paper with the above title, in which he maintained that the benefits following the internal use of hot water were due almost entirely to heat, and gave the following rules for its administration:

1. An ordinary goblet contains about ten ounces, and the quantity may be from one to one and a half goblet.

2. The water may be flavored with lemon, etc.; fifteen minutes may be consumed in sipping a gobletful; wooden cups prevent it from cooling quickly; and it must be taken *hot and not warm*—from 110° to 150° F.

3. It must be taken one hour and a half before each meal, with absolute punctuality, and at bed-time.

4. Increase the temperature of the water as fast as the patients can bear it.

5. The administration of hot water must be continued for at least six months to get its full effects.

6. The dose should be determined largely by the specific gravity and general character of the urine. The object is to bring the specific gravity of the urine to the standard of health.

7. The use of cold fluids in the form of beverages must be absolutely prohibited.

8. Constricted diet is often necessary to the full effects of the treatment in some form of nervous derangements.

The effects of the treatment were set forth as follows: 1, the first effect is the production of a sense of warmth in the stomach, attended by eructation of gas not infrequently; 2, the skin soon shows the effect of the heat; 3, the kidneys exhibit marked effects, and very soon the quantity of urine is increased. On the other hand, in diabetes the quantity of urine is diminished; 4, the accessory organs of digestion, the pancreas, and the liver are stimulated, and flatulence and constipation seem to be relieved.

The author of the paper then referred briefly to the histories of several cases of different diseases which he had treated by the internal administration of hot water, perhaps combined with other remedial agents.

Among these were locomotor ataxia, neurasthenia, gastralgia, local anæmia of the brain with transient aphasia, etc.

The *theory of its action* which the author of the paper advanced was that the nerves of the stomach, possibly the solar plexus, were directly influenced by the heat introduced into the empty organ. He believed that ice-water did more harm than tobacco and alcohol.

Dr. Ranney reached the following conclusions: (1) The plan of treatment is harmless; (2) its effects are comparatively uniform when given for a sufficient length of time; (3) it seems to exert a curative influence in many chronic diseases; (4) it appears that the curative influence of hot water is not transient; (5) it may be employed as an adjunct without detriment to the influence produced by other therapeutical agents; (6) it has a marked influence on the vascular disturbances of the nervous system; (7) in diabetes and some kidney affections he had seen it exert a marked influence for good, and the specific gravity of the urine had been his guide in estimating the effects produced; (8) as a laxative it has a slow but decided action; (9) the skin is stimulated and the cutaneous circulation rendered more uniform.

The author of the paper also recommended the use of hot water in sea-sickness.

DR. E. C. SEGUIN had had but little experience in the use of hot water, and had never employed it in the treatment of purely organic disease of the nervous system. He had been struck with several points in the paper which seemed to him to be open for discussion, and perhaps for some degree of question. First, as to the quality of the agent. It seemed to him that a temperature of 110° to 150° F. would hardly justify classifying hot water as a really heating agent, the internal temperature of the human body being about 100° F.

In the second place, as to the cases brought forward by the author of the paper, a large proportion of them seemed to be cases of neurasthenia, so-called cerebral hyperæmia, anæmia, etc. Many of them constituted one of the most doubtful classes in our classification of disease. Most of these disorders, certainly many of those commonly called cerebral hyperæmia and cerebral anæmia, were nothing more than cases of mal-assimilation in which the digestive organs were at fault, and in these cases Dr. Ranney had employed a combined treatment; combining hot water with strict regulation of the diet, and in some instances restriction to a purely meat diet.

Dr. Seguin suggested a question, namely: Was it not possible that the beneficial effect produced in Dr. Ranney's cases was due to water and not to hot water?

Many patients had a lack of desire for water—what Dr. McElroy, of Zanesville, Ohio, had called hydroadypsia, and many of the symptoms of spinal irritation, so-called cerebral hyperæmia, neurasthenia, etc., could be largely relieved by the internal administration of ordinary water. Hot water might do good as water in aiding assimilation, but it might be a question whether or not the benefit resulting was due to anything more than the water.

With respect to the use of hot water in organic nervous disease, he had had no experience.

Concerning the theory advanced by the author of the paper, namely, that the water produces its beneficial effect through reflex action, Dr. Seguin thought there might be some foundation for it; but at the same time, if a share of the good effect was to be attributed to the liquid, the share which could be attributed to the effect produced by the heat was not very great. He doubted if the degree of heat was sufficient to produce more than temporary hyperæmia of the mucous membrane of the stomach.

He offered a word in defence of cold water, and saw no objection to the use of ice-water upon the same principle with which he questioned the degree of heat. He did not believe that ice-water, ice-cream, etc., were exceedingly cold when they reached the stomach, for they received a large amount of heat in their passage through the mouth and œsophagus.

In point of fact, he had obtained just the same results by the use of ordinary water as those which Dr. Ranney had obtained by the use of hot water, and he gave it with the meals.

Dr. R. W. Amidon had had no experience in the use of hot water in purely nervous diseases, but in the treatment of nervous phenomena such as attended certain cases of dyspepsia, anæmia, particularly associated with the rheumatic or gouty diathesis, he had employed it to some extent. He regarded the derivative action of hot water as extremely doubtful. Moreover, Dr. Ranney had said that no beneficial effects were to be expected until six months had elapsed, but according to his experience no counter-irritant or derivative acted as slowly as this.

He believed that water acted mainly on account of its diluent qualities, and especially so when the vascular system was depleted, as it was in many if not most of the class of cases in which beneficial effects had been obtained by its use. That it might act as a tonic, producing its effects slowly, might be explained on the ground of gradual improvement of the powers of assimilation in accordance with well-established chemico-physiological laws.

Dr. L. Putzel had had no experience in the use of hot water, but thought that the experience advanced by the author of the paper proved too much; for it had been stated that hot water was efficacious in cerebral hyperæmia and cerebral anæmia, and if it produced any effect, which was altogether unproven, it could not be beneficial in opposite conditions.

He thought some stress should be laid upon the point made by Dr. Amidon, namely, that therapeutic agents of this kind act quickly. Hot water should act best at first, if Dr. Ranney's theory was correct. Dr. Putzel was unable to see how any agent which acted in this manner could possibly have any effect upon such organic disease of the nervous system as locomotor ataxia, and he should be very much inclined to regard the improvement which Dr. Ranney had reported in these cases as due to the law of coincidence.

Dr. W. R. Birdsall believed that there was considerable efficacy in the use of hot water, as well as cold water. He was not prepared to deny the agency of heat in the use of hot water, and believed that it was one of the principal agents in producing its therapeutical effects. What he had wished to hear from the author of the paper was statistics of a clear character, but unfortunately in all of the cases reported quite a complicated plan of treatment had been adopted, consisting in a combination of agents, nearly all of which had been found more or less beneficial in the treatment of the diseases under consideration. Certainly no use could be made of those cases.

With regard to the use of hot water in the treatment of functional disturbances of the nervous system, there were always so many complicating influences that it would be a long time before we could separate the therapeutical action from the mere diluent action of the water. Still he believed that heat played an important part in producing irritation of the mucous membrane.

Dr. C. L. Dana had used hot water in the treatment of chronic functional nervous diseases, chiefly in hysterical women with symptoms of gastric disturbance, and had been disappointed in the results. Perhaps the failure to obtain benefit was due to the lack of care in its administration, so minutely urged by the reader of the paper.

Many years ago Dr. Wilkes had demonstrated that the best results had been obtained by the use of agents which did not act upon the nervous system specifically, and therefore it was altogether probable that the line of treatment laid down by the author of the paper was likely to prove extremely useful.

Dr. J. L. Corning had used hot water in the treatment of digestive disturbances concomitant with functional diseases of the nervous system, such as neurasthenia, etc., and had obtained good results. He had no theory to offer with regard to the action of the agent, but could not agree with Dr. Ranney that the good results were deferred for six months, for he had seen benefit follow within six weeks or two months.

Dr. John Scott, of San Francisco, first visited the Academy in 1866, when he had the pleasure of listening to a paper and discussion participated in by our honored president. His next visit to the Academy was at this meeting, and he had been querying in his own mind as to how it was the president maintained his perpetual youth. On confidential inquiry, however, he had learned to his intense satisfaction that it had been maintained largely through the agency of hot water. He was not aware when he came to the meeting that the paper was to have any special political significance, but it might be said to have taken such a turn, and as to what its immediate or remote effect would be upon the result of the political canvass was not easy to say; perhaps the paper might be regarded as a political speech in favor of St. John. He had queried also as to what was to become of all of the doctors and the druggists, should the plan of treatment advocated so ably by the author of the paper be carried into full effect.

During the last thirty years he had used hot water for a variety of affections, but chiefly for checking emesis, especially that which occurs after the administration of ether. He had also employed it in the treatment of a large variety of affections, changed somewhat in color to be sure, and more especially in the form known as milk, and he believed that he had obtained equally good results as those which had been presented by Dr. Ranney.

Dr. T. H. Burchard asked the author of the paper, first, if he had seen any serious or permanent injury done to the digestive apparatus by the long-continued use of hot water, and, second, whether he had noticed that the hot-water treatment had developed a predisposition to intestinal and gastric hemorrhages. He had had opportunity to see a large number of patients who had been following this plan of treatment quite faithfully, and in quite a proportion of them he had encountered the permanent digestive disorders alluded to, and also the tendency to the occurrence of internal hemorrhage.

Dr. Ranney, closing the discussion, said he had not seen any cases, either of internal hemorrhage or permanent impairment of the digestive organs, alluded to by Dr. Burchard. He had seen people who had been re-

duced in flesh rapidly by the use of hot water with restricted diet, but this was purposely done, and when the treatment had been discontinued they immediately began to gain in weight.

He thought Dr. Seguin's criticism with reference to the degree of heat was not valid when the water was taken as he had directed—taken in teaspoonful doses as hot as the patient could swallow, less than 110° F. never being used. Dr. Seguin's theory that ice-water would lose heat in its transmission to the stomach, when applied to the use of hot water would increase the heat, and therefore increase the efficacy of the agent.

The effects produced by the agent were as immediate as they could be; sometimes it took six weeks to get marked effects, and sometimes it took six months to get the best effects. Certainly he did not mean to say it required six months to get any effects from the use of hot water.

The double action of the water—that is, the beneficial effects produced in cerebral hyperæmia and also in cerebral anæmia, could be very easily explained on the ground that the tendency of the agent was to restore the vascular apparatus to the normal condition, and therefore it might prove beneficial in either abnormal condition.

So far as his theory concerning the action of the agent was concerned, it might be totally incorrect. He simply advanced it as one which was plausible, and as the one which seemed to him best to explain the action of the agent.

Of course he had no clear statistics to publish. He had simply mentioned a few results, had brought forward a few cases in which he had tried the agent after well-recognized methods of treatment had proven ineffectual. Complete statistics could be obtained only after a more continued employment of the hot water in distinct classes of cases.

HYDROCHLORATE OF COCAINE AS A LOCAL ANÆSTHETIC TO THE CORNEA.

Dr. C. R. Agnew directed the attention of the Academy to the local use of this agent, and demonstrated its anæsthetic action by applying a two per cent. watery solution to the scleral conjunctiva of two persons. Since the publication of the interesting letter of Dr. H. D. Noyes, which appeared in The Medical Record for October 11, 1884, he had employed it in fifteen or sixteen cases, and with results which had been, both to observers and to himself, most satisfactory and astonishing. At the present time he felt that nothing had been given to surgery of greater importance since the introduction of ether. It was yet to be demonstrated whether the agent when dropped into a wound would produce local anæsthesia. He distinctly disavowed any attempt to claim priority in its use in this city, but wished merely to demonstrate its marvellous effects to the Academy.

Dr. Burchard had seen a case of felon in which the finger was immersed in a solution of cocaine, and local anæsthesia was produced so that the patient suffered no pain when the finger was opened with the knife.

Dr. Birdsall spoke of the benumbing effects produced upon mucous membranes by erythroxylon coca.

The President referred to the use of the fluid extract of coca for strengthening the vocal cords and improving the voice.

The Academy then adjourned.

A Society for Psychical Research.—An attempt is being made in Boston to organize a society for psychical research; *i.e.*, for the study of mind-reading, spiritualism, mesmerism, etc. It may not be generally known that a similar society exists in this city, under the modest title of "The Academy of Anthropology."

Midwives in Buffalo, N. Y.—Two-thirds of the obstetrical cases reported in Buffalo, N. Y., are said by Dr. Pryor to be attended by midwives.

Correspondence.

A PLEA FOR THE COUNTRY PRACTITIONER.

To the Editor of The Medical Record.

Sir: In your editorial on "The Importance of Holiday Seasons for Physicians," you state that "the city physician is subjected to causes of ill-health from which his country *confrère* is comparatively exempt;" that "the latter breathes purer air and has invigorating rides over hill and plain," etc. Having had about ten years' experience in such invigorating work, I think I can speak from experience. There are no harder worked physicians on earth than the country doctor, with a large practice, and none that needs vacations more. His long rides expose him to every kind of weather, and there is hardly a storm but what he is caught out in it. The roads in country districts where there are no pikes get almost impassable in rainy winters, and we generally have it very wet every alternate winter here in Central Ohio. I have known the roads to break up and remain so from October until May, not frozen so you could drive a wheeled vehicle a dozen days during the winter—mud often to the horse's knees from fence to fence. The consequence is that we are obliged to ride horseback, a very laborious way, especially if indulged in for five or six months, almost night and day. The fact is, that a great many country doctors find long rides so intensely invigorating that they have to quit, or go to the city in order to get that rest so much needed by the hard-worked practitioner.

It costs but little more to live in the city than the country when we take into consideration the amount that the country doctor pays for his medicine, and the number of horses it requires to ride over a big scope of country. He can't get along with less than two, and to do justice to the horses he needs four more often.

The competition in this part of the country is just as great as in a city. "The country is full of doctors;" every little town has from one to five or six, and they are not all blockheads either, but wide-awake, shrewd men, who understand their business. Country practice is more difficult than city for many reasons. The country physician is known by all, and his every movement is watched and scrutinized and criticised. When he makes a mistake, or a supposed mistake, it is heralded everywhere, and "off comes his head" often. If the city doctor loses a case, it is not known a square off, and it doesn't hurt him. A city doctor can get along with less knowledge, for he is always acquainted with men eminent in their specialties, and he can consult them. In the country the doctor has to practise all the branches of medicine in order to be successful, consequently he has to study hard, as well as work hard, to succeed

The country doctor's social advantages are not to be compared to the city physician's. The latter can have anything in the city suited to his tastes, while in the country it is long, wearisome journeys and irregular sleep and irregular meals. I ask what can be more wearing? If anyone thinks the country doctor has the best end of it, he is very much mistaken. They are the backbone of the profession, and have not gone to the country for lack of knowledge, but on account of an idea that they can start with less money, which is often a mistake.

S. C. Dumm, M.D.

Columbus, O.

"DEAD TEETH IN THE JAWS."

To the Editor of The Medical Record.

Sir: The report of the cases of otologia occurring in the aural service of Samuel Sexton, M.D., on page 374, current volume, entitled "Pain in the Ears due to Irritation in the Jaws," while it may serve to direct the attention of physicians to make a closer examination of the teeth in all cases of pain in the ears, yet fails to establish the fact that retention of dead (pulpless) teeth in the jaws is a prolific source of aural troubles. A careful examina-

tion of that report fails to disclose an alarming number of dead (pulpless) teeth. Case I. reports: "Lower first and second molars on both sides mere shells." No proof that the pulps were dead. The surgeon who advised extraction of the four (temporary) molars destroyed the masticatory apparatus of the child for at least three years, and in all probability caused the first permanent molars to tip forward, so that the crowns of each will be almost useless during life for mastication; and in addition to the above produced an irregularity of the bicuspids (yet to make their appearance) which will probably render it necessary that one on each side should be extracted in order to afford space for the remaining teeth. Case II. "Both upper wisdom-teeth in a carious state. Both lower wisdom-teeth just (cut?) erupted." The absurdity of the proposition that the wearing of the vulcanite plate increased the irritation in the left ear is too palpable to need comment. Case III. No proof of dead (pulpless) teeth. Case IV. No proof of pulpless teeth. The pain in the ears in the preceding cases was undoubtedly due to exposed or nearly exposed pulps, which any dental surgeon could have relieved, and at the same time saved the teeth alive. Case V. No proof of pulpless teeth. The advice was good. Case VI. No proof of pulpless teeth. From the report it seems that an unnecessary number of teeth were extracted because they were carious! Case VII. No proof of pulpless teeth. Removal of the salivary calculus probably all that was necessary. Case VIII. No proof of pulpless teeth. The erupting wisdom-tooth probable cause of pain in the ear.

The comments of the surgeon in charge are exceedingly entertaining. He first advises the extraction of a vast number of carious (not dead) teeth, and then complains that the wearing of plates (celluloid, vulcanite, etc.) is "an evil of vast proportions." I agree with him in the proposition that a vast deal of ill-advised dentistry is done every day, but this evil is due as much to the ignorance of the surgeon and physician as to the lack of judgment and skill on the part of the dentist. It is no uncommon experience of dental surgeons to find otherwise well-informed medical men deplorably ignorant when speaking of dental anatomy and the diseases of the teeth.

The editorial comments on the report above reviewed are not particularly well-timed. The idea that because an alveolar abscess may be found discharging into the mouth a drop or two of pus every day should be thought a sufficient reason for the extraction of the tooth is not tenable, as it is well known that any alveolar abscess—arising from death of the pulp—can be cured by any competent dental surgeon. I agree most heartily with the editor when he says, "It would seem . . . that perhaps the time is nigh at hand when medical men should be themselves better informed concerning diseases of the mouth and jaws." It is high time. No intelligent dentist could be such an ass as is implied in the paragraph, that he would continue "'treating' dead teeth long after their presence in the jaws has given rise to alveolar abscesses and neuralgias more or less painful." The necessity for "treating" a dead (pulpless) tooth is not well established until the formation of an alveolar abscess. It is presumed that no argument is called for to sustain the proposition that alveolar abscesses should be cured; that nearly exposed pulps in teeth should have a suitable capping interposed between the pulp and the filling to prevent thermal shock; "that all dental surgeons should receive proper and sufficient medical teaching to enable them to prescribe intelligently and to diagnose correctly;" but in the light of present advanced dental knowledge and practice, to have the profession of dental surgery, whose history contains a list of names not less known in the world of science than those of any other honorable profession—Owen, Czermak, James, Mayital, Wells, Harris, Garrettson, Wedl, Bell, and hosts of others whose names are indissolubly connected with the science and practice of dentistry—alluded to as "individuals whose limited knowledge of medicine," etc., by the editor of an enlightened, progressive, and professedly liberal medical journal, is rather straining at the gnat to swallow a camel. This present "individual" protests against such editorials as undignified, unjust, and uncalled for. Respectfully yours,

A. W. Harlan, M.D., D.D.S.,
Prof. Dental Surgery
Coll. Physicians and Surgeons of Chicago.
70 Dearborn Street, Chicago.

THE FEEDING OF INFANTS WITH COWS' MILK.

To the Editor of The Medical Record.

Sir: The Medical Record of September 13th contains an article by Dr. John Binnie upon artificial feeding of infants by means of cows' milk. I am an earnest advocate of this article as a substitute for mother's milk, and agree in the main with the suggestions advanced in the author's paper. But I am of the opinion that too much stress is laid upon the necessity of employing milk from one and the same cow. If the article is good, I maintain that its effect upon the infant is in nowise deleterious, whether it be procured from one or many cows. The great desideratum is that it be as pure as possible It is my experience that change, always keeping in view the purity of the milk, produces no harmful results. To exemplify: A few years ago I had under daily observation an infant six months old, travelling with its parents through the various large cities and countries of Central Europe. I lay special stress upon *cities*, because milk is supposed to be more inferior there than in the country. A month was consumed in the journey, this latter being interrupted by rests of one to seven days' duration. Upon arrival at these places the best milk that could be procured was ordered, and notwithstanding this constant change of milk obtained from different cows of the same nationality, and even the immediate substitution of that of another State, the infant enjoyed most perfect health.

I coincide with Dr. Binnie in respect to the causes which produce harmful effects, with the exception of the one cited above. *Change* is the most insignificant of the causes of failure.

The predominating cause of evil results from bottle-feeding is the want of cleanliness. Not only should the utensils be perfectly clean, but they should be of the simplest possible character. All feeding-bottles with long rubber attachments should be condemned. While these lighten the labor of the attendant, they are a constant menace to the child's health inasmuch as they become a focus of disorders, the walls of the tubes affording a depot for the particles of milk; and notwithstanding they may be rinsed, brushed out, and allowed to remain in water, they will in a short time be found coated, this coating fermenting the milk passing through them. The simple nipples, then, are the safest. In employing these several should be kept on hand, that those not in use might stand always in cold clean water. When they are found to be coated, they should be discarded. With respect to the bottles, it is better to have also several of these, those not in use being filled with water. They should frequently be cleansed with soda and hot water.

Feeding should be limited to every two hours in the very young child. Later, the time may be extended to every third hour. In the interval, if the infant cries, I advise a little pure or slightly sweetened water. During the early months the proportion of milk should be three parts to one of warm water, the former uncooked. The amount of nourishment must be gauged to the little one's capabilities to retain it. The flask should be removed from the child's mouth immediately after it is emptied, in order that air may not be sucked into the stomach. During the process of feeding the nipple must be maintained full for the same reason. I have found that a teaspoonful of lime-water added to each bottle of milk is indicated when there is much vomiting after feeding, or

when the bowels are "bad." When there is constipation, a teaspoonful of mag. sulph. mixed with the milk is called for. In preparing this it is better to add the milk to it slowly in a vessel other than the bottle until the powder is entirely dissolved, when it is poured into the flask. If it is not so treated the nipple is often clogged up.

At no age under two years do I permit table food to be eaten. I confine the feeding to the bottle, crackers, and bread with very little butter. I have seen children thus fed pass over the entire period without experiencing a day's sickness, excepting the eruption of the teeth and vaccination. I have never known them to suffer even with colic.

I am opposed to all species of artificial food as a substitute for cows' milk, believing that the latter is the nearest approach to mother's milk.

In conclusion, I would say that when the mother is from any cause unable or unwilling to nurse her infant, I unhesitatingly elect bottle-feeding, giving it preference to the wet-nurse, believing as I do that the child will thrive as well, and will run fewer risks than if the latter method be adopted. A child fed as I have indicated has every chance of living, and will develop as well as one fed upon its mother's milk or one wet-nursed. That it demands more care and calls for more attention there is no question. Bottle-feeding should be intrusted to careful hands only, and should be supervised by the medical attendant.

ETIENNE C. VIDAL, M.D.

SHALL ARMY SURGEONS PRACTISE OUTSIDE THEIR POSTS?

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In my last letter, regarding the practice of army surgeons among civilians, I stated that Dr. Stanton represented the matter in an unfair light, and his late arguments do not alter my views. It seems difficult to understand why an army surgeon should not have a perfect right to practise his profession among civilians, if they choose to employ him, and if it does not interfere with the duties of a medical officer.

The point advanced by Dr. Stanton, that the law officers of the Government are not allowed to give legal advice to the public, is not well taken. It would seriously interfere with the proper administration of justice if judges and prosecuting attorneys were allowed to engage in private practice, but no ill effects can arise by giving army surgeons the privilege of extending their services to civilians. A man who enters the military or civil service of the Government does by no means surrender the rights and privileges of a citizen, and no reason or justice could possibly be found in any law, regulation, or order, which would prevent a physician in the employ of the Government from using his knowledge and skill, during his leisure hours, not only for the benefit of his fellow-men, but also for the purpose of increasing his income.

In other branches of the public service, either municipal, State or federal, the attachés engage in outside work, and it is quite common to see Government clerks augment their income by performing clerical work for private parties during their leisure time. If Dr. Stanton's arguments hold good, why is it that it never occurred to our lawyers, or other professional or business men, that it is improper for Representatives and Senators to give legal advice, or to continue the practice of their profession, or attend to other business, while they occupy seats in Congress and are paid a fixed salary? Why does not Dr. Stanton object to the outside practice of physicians and surgeons of municipal or other government hospitals, medical officers of boards of health, police surgeons and harbor physicians, not to mention the medical officers of the navy, the surgeons of the Marine Hospital service, pension surgeons, and many others? Most of them draw fixed salaries, "in part paid for by the very physicians they compete with," and many of these positions are as permanent as those held by army surgeons, and are the means of bringing the holders a large private practice, which medical officers of the army can never hope to gain.

As Dr. Stanton says, what will apply to one branch of the public service must apply to all others. According to his views it would be sound logic to prevent all public office-holders from engaging in private pursuits during their leisure hours. To allow them to occupy their spare time for any laudable and honorable purpose, with a view of adding a few dollars to their fixed salaries, would open a way for "unfair and unjust competition" with others, who have not "an assured and regular income outside of their practice," trade, or profession.

I still claim that much of the outside work of army surgeons is done with a view of increasing their knowledge, and I have found, as a general rule, that citizens often apply to army surgeons for medical advice, for which they never expect to pay, because they seem to be impressed with Dr. Stanton's views, "that it is not proper for them (the surgeons) to receive fees for so doing." Much of the work of military surgeons among civilians is a work of charity, and citizens in need of medical aid never apply in vain to army medical officers for assistance. The argument that it would be ungracious to prohibit a medical officer from extending relief to civilians is by no means "unmitigated bosh," and I recall more than one case, which happened not only on frontier posts, but also in large cities, with no "dearth of local physicians," where such restrictions would have been followed by most serious results.

But it is also true that at a few military posts some of the better class of people, living in the vicinity, consult the army surgeon, and, like all decent people, pay for the services rendered. The incomes of army surgeons are by no means brilliant, and since most of them have families to support and children to educate, it appears only praiseworthy if they try to increase their income by engaging in private practice.

Medical officers of the army are not very liable, as a general rule, to come in active competition with local physicians. At the majority of posts their official duties occupy most of their time, and even if such is not the case, they suffer from the disadvantage that they are almost strangers in the vicinity of their stations. Army surgeons are usually changed every few years, and people are not in the habit of changing their old and tried physician, if he is what he should be, a friend, an adviser, and a man well versed in the art of healing.

I have occupied much of the valuable space of your paper, but I shall not ask your indulgence in the future, and if additional replies should be required, I beg to transfer the matter to abler hands.

Very respectfully, CADUCEUS.

CHLOROFORM A DANGEROUS REMEDY FOR TAPE-WORM.—Dr. J. W. Carhart, of Tampasas, Tex., writes that on August 10th he administered the following prescription for tape-worm, as recommended by Dr. J. G. Brooks:

℞. Chloroform,
Ext. filic. mas. fl. ..... āā ʒ ij.
Emul. ol. ricini. ..... f ʒ iij.

M. Sig.—One dose after twenty-four hours' fast.

The patient, a lady, very soon after taking the dose, passed through the excitement stage of anæsthesia, then suffered from nausea and vomiting. She did not get over the bad symptoms until next day. No tape-worm was discharged, though the patient had been passing fragments for some time. Dr. Carhart has had good results with Tanret's pelletierine, and is done with chloroform.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from October 12 *to October* 18, 1884.

NORRIS, BASIL, Lieutenant-Colonel and Surgeon. Relieved from duty as Attendant Surgeon, Washington, D. C., and ordered for duty as Medical Director Division of the Pacific and Department of California, relieving Surgeon E. I. Baily. Colonel Baily, on being relieved, will assume the duties of Attendant Surgeon at San Francisco, Cal.

SPENCER, WILLIAM C., Major and Surgeon. From Department of Dakota to Department of the East.

GODDARD, CHARLES E., Major and Surgeon. To be relieved from duty at Jefferson Barracks, Mo., and to report for duty in Department of Dakota.

MCCLELLAN, ELY, Major and Surgeon. From Department of the East to duty at Cavalry Depot, Jefferson Barracks, Mo. S. O. 242, A. G. O., October 15, 1884.

MCKEE, JAMES C., Major and Surgeon. Granted leave of absence for one month, with permission to apply at Division Headquarters for one month's extension. S. O. 149, par. 1, Department of Colorado, October 3, 1884.

WOLVERTON, W. D., Major and Surgeon. Granted one month's leave of absence, to take effect when his services can be spared by his Post Commander. S. O. 211, par. 4, Department of the East, October 16, 1884.

HAVARD, VALERY, Captain and Assistant Surgeon. Assigned to temporary duty at Fort Schuyler, New York Harbor, N. Y. S. O. 211, par. 2, Department of the East, October 16, 1884.

PORTER, J. Y., Captain and Assistant Surgeon. Granted leave of absence for one month, on surgeon's certificate of disability, with permission to leave the limits of the department. S. O. 138, par. 3, Headquarters Department of Texas, October 9, 1884. Confirms telegraphic order of same date.

Official List of Changes in the Medical Corps of the U. S. Navy, during the week ending October 18, 1884.

BRUSH, GEO. R., Surgeon. To temporary duty at the Naval Laboratory. October 11, 1884.

BURBANK, CHAS. H., Medical Inspector. Detached from the Brooklyn, and placed on waiting orders. October 15, 1884.

CLARK, JOHN H., Surgeon. Detached from the Lackawanna, and detailed as Fleet Surgeon of the Pacific Station. October 17, 1884.

COOKE, GEORGE H., Surgeon. To the Lackawanna. October 17, 1884.

EDGAR, JOHN M., Passed Assistant Surgeon. To the receiving ship Franklin. October 11, 1884.

HUDSON, A., Medical Inspector. Detached from the Lancaster, and placed on waiting orders. October 14, 1884.

HUGG, JOSEPH, Surgeon. Placed on waiting orders. October 13, 1884.

LOVERING, P. A., Passed Assistant Surgeon. Detached from the Lackawanna, and placed on waiting orders. October 17, 1884.

MARSTELLER, E. H., Passed Assistant Surgeon. Detached from the Monongahela, and ordered to the Lackawanna. October 17, 1884.

MARTIN, WILLIAM, Assistant Surgeon. Detached from the Passaic, and placed on waiting orders. October 14, 1884.

MARTIN, H. M., Passed Assistant Surgeon. Detached from the Brooklyn, and placed on waiting orders.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending October 18, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
October 11, 1884.....	0	49	36	3	26	36	1	0
October 18, 1884.....	0	42	34	5	28	44	0	0
Deaths.								
October 11, 1884.....	1	13	5	3	6	21	0	0
October 18, 1884.....	0	11	9	3	4	23	0	0

ELECTRICITY AS AN AGENT IN PROMOTING THE ABSORPTION OF PLEURITIC EFFUSION.—Dr. W. T. Baird, of Albany, Texas, writes us a letter commenting upon Dr. Guiseppe Manzini's views on the use of electricity in pleuritic effusions. Dr. Baird thinks that electricity is not necessarily an irritant, but may act as a powerful sedative, and it is not therefore contra-indicated in the inflammatory stage of pleurisy. He argues also that it is not by electrization and stimulation of the respiratory muscles that electricity causes absorption, but by its vaso-motor stimulation and general tonic effects. General as well as local faradization would be a more successful method in treating these effusions.

THE MOTOR POWER OF THE HUMAN BODY.—Dr. Marey, of Paris, read a paper on this subject at the International Congress of Hygiene, in which he described the ingenious manner in which he had succeeded in measuring the motive power of the human body in its every movement. Planks, with india-rubber coils underneath, recorded, by expelling the air they contained, the exact pressure of the foot. The motions were measured; and photographs, taken in one-thousandth of a second, recorded every attitude during a leap, and where and when the effort was greatest. By such studies, M. Marey had been able to prove that something was gained in the power of walking, in quickening the step from forty to seventy-five steps per minute. But the latter figure was the extreme limit; with a greater number of steps power would only be lost instead of gained.

THE EXPERIENCES OF A HAY-FEVER PATIENT.—A writer in the *Times* says: "I have had 'hay-fever' for nearly twenty years, and I have visited many of the places set down in the association pamphlet as exempt. The best locality I have so far found is the Adirondack Mountains. At Keene Valley, Lake Placid, and a hundred other places within them, there is sure relief. But one must be sure to go into the mountains away from the railroad. I have tried the White Mountains for four years. They are excellent, but not always thoroughly exempt, for an overheating of the body will often bring on a bad attack of sneezing, and in rainy weather one notices a slight difficulty in breathing. In the Adirondacks there are places so exempt that one can do anything and not know that he ever had 'hay fever.' I have tried many of the places mentioned on Lake Superior, and have found exemption in them all. Neither have I suffered in St. Paul or Minneapolis to any noticeable extent, or at Lake Minnetonka. Fire Island, the Isles of Shoals, and others similarly situated near the land, are not so good as the primitive mountains. They relieve the disease wonderfully at all times, but it is only when the wind blows from the sea that they give perfect exemption."

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Original Articles.

CONTRIBUTIONS TO THE ANATOMY OF THE LEMNISCUS.

WITH REMARKS ON CENTRIPETAL CONDUCTING TRACTS IN THE BRAIN.

BY E. C. SPITZKA, M.D.,

PROFESSOR OF NEURO-ANATOMY AND PHYSIOLOGY IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL.

(Continued from page 451.)

IV.

V.—RELATIONS OF THE LEMNISCUS PROPER TO THE INTERNAL CAPSULE.

WITHOUT entering into a special discussion of that part of the lemniscus which occupies the olivary territory in lower levels, and in higher ones becomes fused with that portion of the interolivary tract which with it constitutes the main part of the lemniscus, let us proceed to consider its relations in higher (cephalic) levels, where the greatest obscurity prevails.

The gross appearances indicate a transition of a part of the lemniscus, which reaches higher (more cephalic) levels than the post-optic lobes, into the internal capsule. To what extent there is interruption by thalamic gray matter is uncertain, but the gross appearances alluded to appear to correctly match the real relations.

In levels slightly caudad of the one in the figure, where the thalamus is struck in its free portion, a clear triangular field is seen (6), which is an inverted and magnified reproduction of the lemniscus triangle; it is a fasciculus of the corona radiata. On passing cephalad, a part of the lemniscus runs into a field occupying the place of 6. It would appear as if the thalamus intruded its substance, so that to reach its double the lemniscus has to break through. The more plausible explanation seems to be that the fasciculus bends round from within outward, with the convexity cephalo-mesad, leaving the gray streak latero-caudad, so that what was internal and posterior (meso-caudal) in the lemniscus, became external and anterior (ecto-cephalic) in the capsule, and what was external in the lemniscus became internal in the field replacing 6. The curve in field 27 of Fig. 12 indicates such a relation, while the course of the tract in the specimen from which Fig. 11 was drawn, is of similar import, but indicates also a laminated dispersion through gray matter.

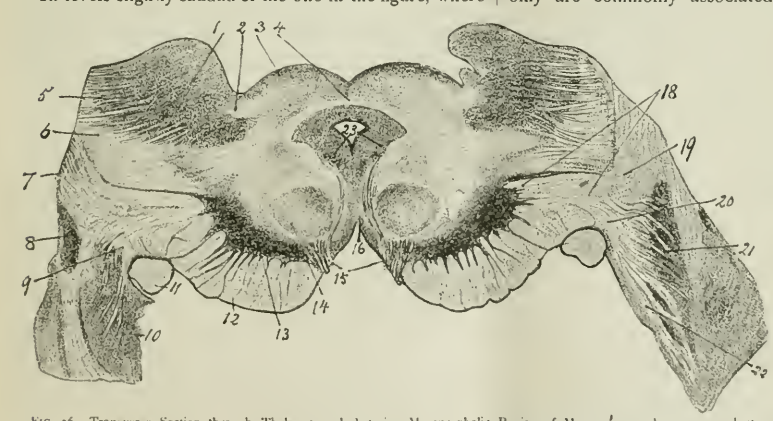


FIG. 16.—Transverse Section through Thalamic and Anterior Mesencephalic Region of Man. ½, numbers in aqueduct, pointers on nuclei of third pair; 3, anterior pair of corpora quadrigemina; 6, field of optic radiations of Gratiolet, chiefly derived from external geniculate body and optic tract; it is traversed and perhaps joined (?) by thalamic radiations; 7, 18, 19, passage of Gratiolet's fasciculus into the capsule, in part to temporal lobe; 20, 21, 21, similar passage of pes fibres into and through the posterior serrations of the lenticular nucleus (21); 12, pes; 13, substantia nigra; 14, tegmental nucleus; 15, roots of third pair. It was neglected to designate the lemniscus field; comparison with Fig. 14, L, will aid in its identification; it occupies the triangular field included between the upper lateral angle of the aqueduct gray, intrudes one end between the outer aspect of the tegmental nucleus and the substantia nigra, and detaches its third corner part toward the field 6; the mesal demarcation is not as distinct in this level as in one of those to be described.

Forel[1] could never discover a transition of lemniscus fibres into the thalamus, a small part he traces to the corpus mammillare, but the major part (*Haupt-theil*) becomes lost in a confused medley of finely broken up gray and white substance in the latitude of Meynert's bundle in the dog, while in man the gray substance is wanting, the lemniscus remains more compact, and as I have not been able to confirm from a study of specimens stained in fuchsin,[2] its fibres appear matted together like felt-work.[3] I am unable to come to any conclusion as to the relation between the post-brachium and the lemniscus layer alleged by Forel. The direction of his sections is about the most unfortunate to have selected, as the majority of tracts are divided obliquely in them. His employment of transverse sections (Meynert-Stilling's plane) in the dog, possibly accounts for his finding the relations of many tracts clearer in that animal than in man. Our conceptions as to direction and space in anatomy are commonly associated with the great body planes, and to this simple tradition of topography Forel's sections do great violence.

I think that by describing the relations of the lemniscus main portion (*Haupt-theil*—Forel) in three successive levels of the Meynert-Stilling plane, I may make myself better understood than by proceeding immediately to consider the course of the fasciculus as such.

First level: Through the anteriormost twelfth of the pons, and the middle of the post-optic lobes (post pair, *C pp*, quadrigemina), the main lemniscus and the detachment to the post-optic lobes are altogether, the pedo-lemniscal fasciculus nearly continuous,[4] covering Soemmering's substance dorsally. The mesal two-fifths of this united area follows the ventral face of Wernekinck's commissure, being separated from it by a gray

[1] Archiv für Psychiatrie, vii., pp. 431–433.

[2] I am indebted to Dr. Starr for this staining reagent; its future usefulness think will be made most evident in this particular region.

[3] Fibres can be traced for more than the width of the field outward; other fibre noticed obliquely divided in the interstices of the intervening bundles cannot b confounded with them.

[4] A small detachment of Soemmering's substance intervenes.

intercalation. In my case of secondary degeneration the outer portion was shrunken and degenerated, only a small area of the part, a third the half diameter from the raphe, escaping.[1]

Second level: Through the anterior pair, and the pedunculi cerebri, at the level below the emergence of the third pair, striking at the same time the external geniculata. Main lemniscus, separated through substantia nigra from the pedo-lemniscal tract by a large interval. It occupies a nearly mortar-shaped area, the mortar being supposed to be inclined dorso-laterad. Its base rests half on the lateral sector of the area of the *tegmenta brachium*, the other half fades away into the dorso-mesal face of the lateral half of the substancia nigra. The mesal end of the top of the mortar is represented by the end of the lemniscus field, the ectal end by fibres which begin to field through the gray matter between the lemniscus and pulvinar. Most of these fasciculi may be traced a considerable distance toward the field which replaces 6 of Fig. 16 in higher levels. In lower levels where this fielding off detachment is not marked, the lemniscus resembles the horns of a Cape buffalo, attached to the field of the *tegmenta brachium*, just as the latter are attached to the bulbous enlargements of the Cape buffalo's forehead.[2] Degeneration in my case occupied the ectal half of the mortar as well as the process directed toward the substantia nigra. The part directed to the tegmental nucleus, and which is mixed with fibres of the tegmentum proper was unaffected.

Third level: The lemniscus area described under two becomes smaller and smaller as the fielding off continues; finally direct fasciculi can be traced into the internal capsule. These were degenerated in my case, where detailed examination showed total destruction of the middle (main) part of the lemniscus tract. The course of the bundle which the dying out lemniscus sends to the capsule, is first directly ectad, and into the lower part of the field continuous with 6; it does not join the latter, but changing in direction dorsad leaves the level of the section. The field which these lemniscus fibres appear to occupy in the capsule is situated on the border of the inward and downward slope of the thalamus, in a level slightly anterior to that of figure 16; to accommodate it, the triangular field 6, is moved laterad and more dorsad. A direct continuity to this field is not demonstrable, but as it appears with the disappearance of the lemniscus the course of the fibres is in that direction, and no other adequate source[3] can be discovered, it is reasonable to connect them, provisionally at least. As already stated, fibres can be traced from the lemniscus field to the borders of this one, and above this level the corresponding part of the lemniscus can no longer be identified. Defibrillation supports this view with all the weight which may be attributed to its uncertain evidence, and indicates that the fasciculus in which it runs occupies the course represented in the tract 27 of Fig. 12. In my case of secondary degeneration, the latter occupied a field dorsad of the radiations from the tegmental nucleus to the capsule, and up to date has not been traced further.

The relations of the internal capsule at this point are very complex, but interesting. The outermost fibres of the *pes* are the first of this bundle to enter it, as we pass caudo-cephalad. In transverse sections a bundle is seen (18, Fig. 16), which is repeated in a number of levels. In the lowest it represents Gratiolet's fasciculus,[4] which unites the occipito-temporal lobe to the cerebellum; on the level of the body of Luys, the corresponding bundle connects the body of Luys with the inner articuli of the lenticular nucleus.[1] This latter connection is one of the most satisfactory demonstrations of the section method. It is in the field 19, which with the elimination of the field 6 comes in contact with the zonal stratum of the thalamus, that the outer part of the main lemniscus tract appears to run.

I am unable to contribute anything to the knowledge of that part of the lemniscus which Flechsig traces to the *ansa lenticularis*, the analysis of the material at my disposal not having been completed. It would be a remarkable coincidence if, as is not unlikely, the lemnisco-pedal tract, after temporary deflection to the pes pedunculi, took the same course. Thus would the two divisions of the stratum intermedium become reunited.

VI.—A Note Regarding the Column of Goll.

On reviewing the subject of the fœtal and post-fœtal development of nerve-tracts, I found that many of the corrections since made of Flechsig's representation of the course of Goll's columns, in his first treatise, where he leaves them undesignated in lower dorsal levels, and represents them as a semi-oval area on either side of the posterior fissure of the cord, could have been made by a more extensive study of embryonic material. There is really no difficulty in recognizing this tract, in perfectly fresh cords. Through the courtesy of Dr. Jean F. Chauveau, I had the opportunity of examining the cord of a foetus (forty-one centimetres from vertex to heel), and found that the tract of Goll is triangular with a pointed apex, directed toward the point of entry of the posterior roots; it failed to reach the dorsal periphery of the cord, except near the fissure. It exactly reproduced the extent of secondary degeneration noted by recent German writers, and the mesal degeneration in a case of locomotor ataxia in a patient of Dr. McBride's, in whom the root zones of the lumbar enlargement and lower dorsal regions alone were involved, the secondary change in the columns of Goll having evidently advanced only up their lower (caudal) portions. In the fœtus above referred to the right crossed pyramid tract was present in the lumbar cord in its lower levels, while the left was absent. Correspondingly the right tract extended farther forward on the right side in the cervical region, sending a spur between the two divisions of the anterior part of the lateral column. Evidently this is in connection with dextral preference, for there was no compensatory development of the uncrossed tract.

Although the columns of Goll were still gray in this fœtus, the stratum interolivare was in part distinctly white, there was a whitish field dorsad of the ideal prolongation laterally of the substantia nigra, and this field extended into the internal articuli of the lenticular nucleus. I am becoming more and more convinced from the contradictory nature of these findings that absolute reliance cannot be placed upon the apparent continuity of myelinic development. In this case, careful analysis showed that the white matter in the lenticular nucleus was derived from a belt of white fibres surrounding the body of Luys. The converse of Flechsig's proposition, that nerve-tracts which do not develop in chronological accord do not appertain to the same system, has already been shown to be erroneous by Forel.

VII.—The Relations of the Sensory Tracts and the Trigeminus Roots.

The cases of lesion of the pons and oblongata, while indicating that below the exit of the trigeminus nerve the anæsthesia of the face is on the side of the lesion, which was the case in a tumor of the pons (caudal half) and oblongata, last autopsied by myself, are too few, and involve too many other factors to permit of the unreserved acceptation of Starr's conclusion (*loc. cit.*, page 55): that a lesion in the cephalic part of the trigeminal area in the pons will always cause contra-lateral anæsthesia, *as stated*

[1] The lemnisco-pedal tract was entirely healthy. On the normal side a bundle in the plane of the section, ran *in* the substantia nigra from the lemnisco-pedal region to the outer fifth of the main lemniscus, joining it by intrusion and defasciculatioo.

[2] This *simile* may be made for other systems in the mesencephalon, there are three concentric repetitions of a similar arrangement, one of these being the post. long. fasc. of the tegmentum.

[3] The post-brachium is not extensive enough to account for the formation of this field, if, as Forel's statement suggests, the two be confounded.

[4] Even in sections the superficial examiner is misled into suspecting a relation to the optic tract; hence Stilling the younger may have erred in describing such a connection, as he discovered it by the faulty defibrillation method.

[1] I have found four lenticular *articuli* more often than three, and in one case a fifth distinctly marked.

by him. A lesion might indeed occur in this part of the pons, involving the trigeminus roots—descending of the same level, or ascending—previous to their escape from the brain axis, or their union in the great sensory root, and naturally would result in anæsthesia of the same side throughout if direct descending roots existed.

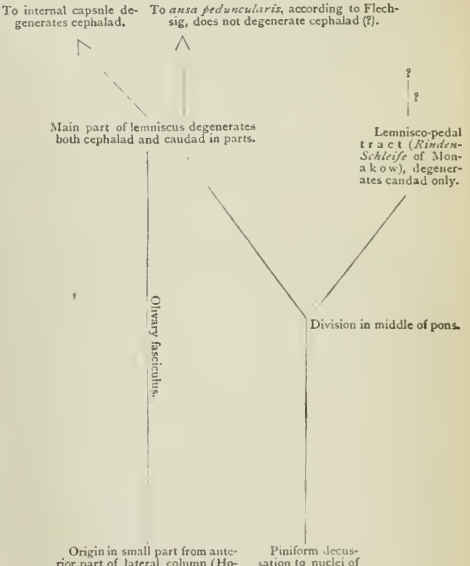
That there is a decussation for certain of the roots of the sensory division of the trigeminus, has been a familiar fact since Meynert's day. Of this nature is probably the great raphe root (Fig. 15, 5r), and a beautiful set of fasciculi, which decussate in the gray matter of the ponto-crural region of the dog, in the immediate continuation cephalad of Wernekinck's commissure (x of the tegmenta brachium). These fasciculi run from a field which corresponds to 14 of Fig. 10 (not necessarily connected with it), decussate in the gray matter to the opposite side, where in a beautiful sweep they reach the exit level of the fifth pair. It, with the raphe root, embodies probably the decussated connection of the trigeminus with the higher centres which Starr had in mind. If the latter's theorem is correctly understood by the writer, it implies that the area of the cephalic part of the pons, homologous with the root region of the caudal half—for that lies in the outer third of the reticular formation—contains a centripetal tract derived from the opposite trigeminus nerve. For this theorem there is thus far no anatomical support, and not even a hypothetical tract, while, as stated, the cases cited are too few and indecisive, although the general proposition that somewhere between the capsule and the nerve-root a decussation must take place is well based on clinical grounds, and has not been contradicted since Wernicke first asserted it. The raphe root of Meynert, and the strands discovered by me in the dog and ape, cannot be traced to the capsule, and it is a great question when the further course of these bundles will be determined, as small focal lesions of the involved districts are among the rarest occurrences in cerebral pathology.[1]

It is nowhere explicitly stated by Starr that he considered the descending (mesencephalic) root of the trigeminus in this theorem, although he speaks of its junction with the ascending root as the spot which separates the area of homo-lateral and contra-lateral facial hemianæsthesia. If he considered the root, ordinarily so called a sensory root, he would—as it remains on the same side throughout, from its origin in the vesicular cells—have to except so much of the trigeminal distribution as is provided for by that nerve-root. Forel, and Wernicke agrees with him, traces this root into the motor division of the trigeminus, so that if his view is accepted, the above exception need not be made. Wernicke also traces à decussated origin from the substantia ferruginea (locus cœruleus), which receives a contribution from the raphe root, and, after decussation, corresponds to what I term the raphe root. To affect this tract, the lesion would have to be nearer the lateral ventricular angle than Starr indicates, inasmuch as the outer third of the reticular field does not include this tract.[2]

Wernicke calls attention to the dilemma that either the descending decussated root embodies all tactile and pain tracts of the trigeminus, or that some other undifferentiated part of the area destroyed by the tumor was in connection with the lower root. I believe only the latter alternative can be seriously considered, and Starr's explanation is in this direction, though it fails to accommodate itself to all the facts of the case, besides having as yet but a very problematical anatomical basis. He concludes, namely, that the central tract for the trigeminus runs in the outer part of the tegmentum. It may in part; but the only cases which permit of a conclusion, as far as they go, antagonize this view. Both cases are cited by Wernicke. First,[1] hemorrhage in the *lower* part of the left crus: right facial and extremity hemianæsthesia, left oculo-motor paralysis, right facial and extremity paralysis. Second,[2] pea-sized cyst in *inner* part of left crus, enclosing the third nerve of that side and extending to the lamina perforata posterior: left oculo-motor paralysis; right facial, hypoglossal, and extremity paralysis; right-sided diminution of sensibility, including the face. With connected "serous" softening of the contiguous right crus, right oculo-motor paralysis supervened later. From these cases it is to be inferred that the trigeminus and extremity sensory tract travel in that region of the crus which is traversed by the oculo-motor nerve—in fact, the tracts which run in the inner (and outer) confines of the tegmental nucleus, corresponding thus to the course of the decussated fasciculi found by me in the dog, to v. Monakow's Rinden-schleife, and to Wernicke's lemnisco-pedal bundle. As the anæsthesia in none of these cases was complete, we must conclude that there may be other tracts, and these may run as Starr indicates, but evidence does not point exclusively in that direction.

VIII.—Conclusions and Some General Observations.

The lemniscus layer is not—as Flechsig claims—divisible into a larger tract which degenerates in the descending direction, and a smaller tract which "does not degenerate for long distances in the descending direction."


To internal capsule degenerates cephalad.
To *ansa peduncularis*, according to Flechsig, does not degenerate cephalad (?).
? ?
Main part of lemniscus degenerates both cephalad and caudad in parts.
Lemnisco-pedal tract (*Rinden-Schleife* of Monakow), degenerates caudad only.
Olivary fasciculus.
Division in middle of pons.
Origin in small part from anterior part of lateral column (Homén's case), chief origin not definitely determined, but possibly from posterior colnmns.
Piniform decussation to nuclei of Goll and Burdach.

The degeneration of Flechsig's larger portion, as in Homén's case, is both ascending and descending, and in that case the impulse to descending degeneration was not sufficient to carry more than a small part near the periphery of the anterior third of the lateral column below the olives. On the other hand, the more compact tract—that is, the interolivary portion—does degenerate in the descending degeneration for its entire (known) anatomical extent. This part is not in "immediate juxtaposition" to the great olives, if by "great olives" the ganglionic part is meant; in the upper quarter of the

[1] I observed in 1877 an oval hemorrhage, destroying the raphe above the level of the raphe root, in a paretic dement, at the same time there was an enormous ventricular hemorrhage and a meningeal extravasation, destroying any value the case might otherwise have had.

[2] Wernicke announced the separation of the trigeminus sensory and the extremity sensory tracts (p. 527, Archiv f. Psychiatrie, vii.) seven years before, and also stated that sensory tracts for the latter remained on the same side for a further extent. He also considers all possible explanations and objections to them that have since been made, in connection with the symptoms reported, in the admirable paper cited.

[1] Weber: Medico-Chirurgical Transactions, vol. 46, p. 121, 1863.

[2] Rosenthal: Wiener Med. Jahrbücher, 1870.

oblongata it touches the olivary "halo," in the middle olivary levels the inner accessory olive (Fig. 4), while in the lower levels a large mass of fibres (Fig. 3) interposes; this latter is the "Vorderstrangsrest," or remnant of the anterior column.

The stratum interolivare (intermedium), while not the largest, is the most distinct of the lemniscus fasciculi; it detaches two divisions, a larger to the main lemniscus, a smaller constitutes the lemnisco-pedal tract, which latter is a constant feature in the higher mammalia.

Ascending degeneration in the case of a lesion affecting the main part of the lemniscus is partial, as far as it can be traced (in my case), destroying only the outer part of the field in the thalamus region.[1]

The diagram on the preceding page illustrates the relation of these different parts.

Since in Starr's case the lemnisco-pedal division of the interolivary stratum was absent, and this absence was connected with absence of the hemispheres, and as the same (?) tract was degenerated in Monakow's experimental ablation of the cortex, and can be traced by direct anatomical methods (dog), it is to be left an open question whether the interolivary tract does not include fibres having centrifugal functions.[2]

One of the reasons for regarding the interolivary stratum as a muscular-sense tract, is that this is the only sense which can be allowed to decussate from the posterior nuclei in such fashion as this stratum does, if Brown-Séquard's dictum continues to bear the interpretation it did up to the time of Ferrier's experiment. It is, however, questionable whether it is the sole tract for impressions involved in the mechanism of co-ordination! There is a singular unanimity in the description of the kind of ataxia found with lesions of this tract, when alone involved it relates to manipulation, and not to equilibrium. The latter I still believe to be a function which utilizes the paths of the posterior cerebellar peduncle and the vestibular branch of the auditory nerve.

As connected with this question, I would endorse the exclusion of the restiform column from any participation in the conveyance of pain and temperature sensibility made by Starr; this is almost a self-evident proposition. In concluding that the direct myelo-cerebellar tract may set up reflex vegetative acts, the same writer advances a suggestion in conflict with Flechsig's statement to be referred to. Visceral sensations are not unconnected with the unconscious maintenance of the equilibrium, and hence the distribution of the columns of Clarke does not appear opposed to the view that they conduct centripetal impulses regulating the equilibrium. It would be singular, if the cerebellum were a visceral reflex centre, that there should be so little uniformity in its development in connection with the uniformity in visceral functions of all the mammalia, and no harmony between the development of any portion of the cerebellum and the greater or lesser development of the columns of Clarke adduced to support this theory. The association of visceral lesions with cerebellar disease and experimental lesion of the restiform column is, however, a noteworthy fact, and one which seems to necessitate some such explanation as the one suggested, so that the direct cerebellar tract would have to be regarded in part as centripetal (visceral equilibrium impressions) and in part as a centrifugal tract, unless the visceral reflexes be considered as travelling in a different channel from the one carrying the unconscious impressions which determine them. Flechsig[3] concludes that the direct myelo-cerebellar tract conducts in a centripetal direction, and traces it to the cerebellar cortex; later, in the same treatise (p. 42), he cautions against the adoption of the view that exclusively centripetal conduction occurs in the direct myelo-cerebellar tract on account of the connection of the columns of Clarke with the anterior gray horns. May this not indicate an independent reflex arch?

The evidence of passive (non-irritative) lesion of the cerebellum is to the effect that it is not essential to the proper conduction of the visceral functions, not more so than the cerebral hemispheres. The argument contained in the following: "It is a noticeable fact that these symptoms of cerebellar disease (indigestion, vomiting of a peculiar kind, obstinate constipation, polyuria, albuminuria) *unlike* the ataxia, are not produced by lesions of the vermiform lobe *alone*, but occur when the cerebellar hemispheres are the seat of lesions, such as abscess and softening from embolism and thrombosis, which neither increase the intracranial pressure nor affect in any way directly the floor of the fourth ventricle and the pneumogastic centres there or in the flocculus,"[1] takes no account of the fact that Flechsig's method teaches that the direct cerebellar tract connects with the neighborhood of the vermiform lobe (Mittelstück) as contrasted with the lateral parts; or if it does take this into account, must assume an irritative influence by transmission from part to part. Without venturing to pronounce adversely to this theory, I offer the above considerations, leaving it to investigations I am at present concerned with, to contribute further facts to this interesting question.[2]

As the posterior columns are small in the porpoise and inadequate to the formation of the restiform, it is to be assumed that the direct myelo-cerebellar tract is very large in this animal. This tract is connected with the columns of Clarke, whose extent, in the cord, corresponds closely to the extent of those body segments in which the great viscera are collected. In the porpoise, as in all the cetacea and the phocidæ, the visceral cavities are unusually large, and the viscera themselves more complicated than in related animal groups. The cells of the columns of Clarke resemble in shape those of nerve

[1] Over a year ago Hitzig announced before the German alienists and neurologists that he had observed descending degeneration of the lemniscus in a case of lesion in the crural region. His promised detailed publication has not yet become accessible to me.

[2] There is this difficulty about the explanation, if arrest of development is instituted early enough even centripetal tracts are involved by atrophy of the station *to* which they go.

[3] Plan of the Human Brain, p. 24. I cannot agree with Flechsig in the surmise expressed in his sequel, that the correspondence of the size of the olives in the animal scale harmonizes with that of the dentated nuclei, or that both depend for their common developmental grade on the lenticular nucleus or cerebellar cortex. Flechsig himself adds a query to this guess. The fact is that in a series of animals, beginning with the marsupial carnivora (opossum), then passing through some rodentia to the placental carnivora, the ape and man, there is a parallel rise and homology of type in all these parts. In the elephant and porpoise, however, notwithstanding their enormous cerebellum, the olive is of no higher a grade of development than in the hippopotamus. (In the elephant the olivary lamina is more bulky.) If any evidence were to be derived from comparative anatomy, it would show that there are two types of olivary development, one marked by a progressive complication of the denticulate part of the olive found in animals with freely movable digits, and one in which the accessory nuclei nearly equal, or even preponderate over the main U-shaped, respectively dentate nucleus, which is the case in the pachydermata and the cetacea, who are in no case endowed with free digital motion and co-ordination. But for the apparent connection between digital motivity and olivary type, I would hazard the suggestion that the development of the olives suggests a greater affinity, zoölogically speaking, between the pachydermata and the cetacea than I have hitherto been inclined to admit (Recent Studies in Localization, Chicago Journal of Nervous and Mental Diseases, 1877).

[1] Starr, loc cit., p. 63.

[2] Comparative Anatomy is competent, I think, to settle some of the questions indicated. In the porpoise the relations are most aberrant. In the usual situation there are no pyramids, nor a decussation either of pyramid or interolivary fibres. There is but *one* of the columns of the posterior columns, in anything like the ordinary development, and an atrophic state of the posterior columns generally in the uppermost cervical levels. The "Vorderstrang-grundbündel" of Flechsig are enormous, and consequently—the only exception to the rule in mammals—the anterior (ventral) fissure of the cord is deeper than the posterior in this region. Connected with this, probably, is the fact that the posterior longitudinal fasciculus, and the inner division of the reticular field are unusually large, constituting a united area which is parallel to the raphe. The nucho-dorsal innervations probably pass through this tract. There is a raphe, but unlike that of man, it is thinner ventrad than toward the nerve nuclei, where it is double the width of other points, and sends out the only powerful lateral processes it boasts of in the corresponding parts of the oblongata. The two olivary nuclei approach each other as in the elephant, and do not resemble in type the olivary nuclei of the carnivora, but the pachydermata (hippopotamus, horse, and elephant). The arciform fibres of the olivary decussational commissure do not take a course so near the lateral field of the oblongata as in man, but condensing in powerful strands break into what seems to represent the restiform column from the middle of the reticular field. In some levels there is no fissure nor raphe between the olives in their ventral portions. The main accession to the representative of the restiform column appears to be the direct transition of fibres from the posterior column through a field analogous to *f*, 3 Fig. 3) the arched fibre field which interpolates itself between the nucleus of Rokindo and that of Burdach, and which as its partial freedom from degeneration in my case shows, embodies fibres independent of the interolivary stratum. There appears still more cephalad to be a bodily transposition of the posterior into the restiform column.

At the junction of the oblongata to the pons there is a powerful fibre system, identified by the naked eye, which may indicate a decussation of ventral (pyramid or intermediate) fibres (?), but in connection with this there is also a development of a lateral ventral mass, attached to the auditory nerve, which is thus far not known to be paralleled in mammalian anatomy.

The pons, notwithstanding its great apparent surface development, is thin, that is, of slight dorso-ventral extent, and consists, as in the elephant, of transverse fibres and ganglia exclusively; there are, as in the elephant, no longitudinal, *i.e.*, pyramid fibres. Between the tegmentum and the pons, there is a system of nerve-bundles imbedded in ganglionic matter, which resemble in disposition the lemnisco-pedal bundle.

nuclei known to be related to visceral functions. It would, therefore, as far as the case of the porpoise stands, be a confirmation of the view that the columns of Clarke and the cerebellum which derives fibres from them through the direct myelo-cerebellar tract, have a relation to visceral functions; the mother-bed of the direct myelo-cerebellar tract corresponding in extent to the visceral segments, and its cells corresponding in shape to those known to have relations to the viscera. One end of the Purkinjean cell of the cerebellum, too, is as Meynert has ingeniously indicated, of a similar structure. If any inference is to be drawn from cell structure as to function, then the Purkinjean cell is a mediator between a visceral centripetal tract and a cerebral one, connected with the information of the motor centres as to the space sense. The case of the porpoise speaks as loudly for the "equilibrium" as for the "visceral" theory, inasmuch as the wonderfully co-ordinated movements of the porpoise are chiefly carried out by the trunk muscles.[1]

It it evident that within a large area of the medulla oblongata, one covering its entire field, with the exception of the pyramid tract, and the apparatus of the nerve nuclei, we must look for the centripetal tracts which inform the *Psyche* of the contacts with the outer world, the visceral sensations, and the muscular sense. Many of the movements dictated by the perfective economical needs of the body are not directly mediated through the apparatus of consciousness, indeed many of them are absolutely removed from the control of the *Psyche*.[2] That the translation of the peripheral impression to the centrifugal impulse, in their case, takes place without the intervention of the cerebrum, is evident. The ganglionic apparatus of the cord, and in higher degree of the oblongata, suffice for these objects. It is a fact of significance, that of the reflex and automatic actions which are made to serve these objects, those determined in the mesencephalon, pons, and oblongata far exceed in complexity and elaboration those of the cord, and in direct proportion to this complexity and elaboration do they display an approach to intelligence. It is a dogma of physiology that all the intricate automatisms of the brain-axis, be they subservient to respiration, thermic regulation, or nutrition, depend for their origin and development on impressions indicating the nature of the organic need.[3]

We must here assume as an element in our calculations, that the area of the oblongata within which we are seeking for the centripetal tracts, includes some which we may never be able to determine, because their disturbance is not made manifest to consciousness, not discoverable by instruments of precision, and cloaked by vicarious action of the symmetrical ganglionic apparatus. While unilateral *irritative lesions* may enlighten us in this field, through positive symptoms produced, *subtraction lesions*[4] must be bilateral in most cases to do so.

There are other functions, carried on by centripetal tracts, which are subservient to needs which constitute a connecting link between the vegetative and deliberate purposes: they regulate the bodily equilibrium. Notwithstanding the many objections repeatedly urged to the older view regarding the cerebellum, the proposition formulated by me some years ago, that a skilful and rapid co-ordination, associated with a good sense of rhythm, space, and time in connection therewith, was not possible without an intact and well-developed cerebellum, does not seem to be invalidated by any authentic case, while it is confirmed by a large number of observations.

The higher form of sensation, that of conscious perception, travels through the area left over after the subtraction of the cerebellar tracts. Inasmuch as there is an intimate dovetailing of lemniscus, reticular, and cerebellar tracts in this area, in the lower half, and indeed nearly in the entire level of the oblongata, accurate and positive conclusions as to the differentiation of pain thermic, and tactile tracts in the reticular formation and lemniscus, can be derived—as far as the study of single cases is concerned—from such only where the focus of disease is situated above the level of the fully formed posterior cerebellar peduncle. Of these forms of sensation, the highest, or rather the one made subservient to the most intellectual purposes, is the stratum interolivare, which conveys the so-called muscular sense brainward, for the purpose of facilitating skilful employment of the psycho-motor centres. All studies made so far fail to give any satisfactory account of the *raison d'être* for the paradoxical phenomenon observed by Brown-Séquard—that the tract for one sense, which is in part but a refinement of associated peripheral impressions, should not decussate in the cord, but decussate in the oblongata, while the others should decussate in the cord, and—redecussation being fairly excluded, inasmuch as that assumption would be still more out of harmony with the facts than any other—not decussate in the oblongata. There is no physiological theory, nor mechanical factor of development, nor, as yet, are there adequate anatomical paths, to explain why the ordinary sensory channels should, so soon after their entry, seek the opposite side of the cord to travel brainward in. It is for this reason, I believe, that so many teachers of cerebral anatomy have contented themselves with tracing the great tracts from and to the level of the first cervical nerve-root, until Wernicke formally opened a question—and answered it as satisfactorily as any one up to the present—which had probably confused or puzzled all of his co-laborers.

[1] This animal, provided with clumsy flippers and a rudimentary dorsal fin, is capable of executing evolutions exceeding anything in the vertebrate domain, not excepting the blinded bats of Spallanzani, for they involve at once gross force and skill. The porpoise executes his remarkable evolutions around his own axis, while rushing along with the speed of a steamer, and it is a notorious fact that cohabitation—an act requiring the ordinary mammalian mechanism—is carried on while the herd is tumbling along with undiminished speed. All is done by the axial muscles.

[2] Fortunately too!

[3] I do not enter here into a discussion of Van der Kolk's beautiful theory of respiration as the outcome of a direct rhythmical asphyxia of the oblongata.

[4] Lesions involving elimination of nervous mechanisms.

ON THE NERVOUS ORIGIN OF SOME DISORDERS OF THE ALIMENTARY CANAL.[1]

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The following observations on the often misunderstood disturbances of the gastro-intestinal tract of nervous origin will contain nothing new to those familiar with the diseases of the nervous system, but will be of interest to the practitioner, I believe. As to the theory of these affections, it must be remembered that Leube, in an article entitled "Dyspepsia Nervosa" (*Deutsche Zeitsch. für Klin. Med.*), thought the latter to be peripheral neurosis of the stomach, affecting the central nervous system by reflex only. It cannot be denied that such cases may occur, but they are certainly very rare.

I believe, with Beard, F. Richter, Möbius, Leyden, Burkart, and others, that nervous dyspepsia, etc., is not of local origin, but a symptom of general neurosis, particularly of cerebro-spinal neurasthenia. Organic diseases of the nerve-centres may, also, reflex severely upon the functions of the stomach, when the pneumogastric centre or the cervical portion of the cord or the abdominal ganglia of the sympathetic have become the seat of lesions.

Between twenty and thirty per cent. of patients with organic nervous disease have gastric or intestinal disturbances. Periodic vomiting and retching—crises gastriques of Charcot—often constitute prominent and early symptoms of typical tabes, but they have been observed also in subacute myelitis, disseminated sclerosis, and progressive paralysis. But similar paroxysms of severe retching and vomiting, associated with violent gastric pain, great tenderness in the epigastrium, and the impossibility to retain food, lasting for two weeks and more, simulating gastritis or ulcer, and presenting considerable

[1] Read at the meeting of the New York Neurological Society, October 7, 1884.

difficulties of diagnosis, have been observed occasionally independent of anatomical changes in the stomach or central nervous system. Leyden, in an article on "Periodical Vomiting and Gastralgia," published in the *Deutsche Zeitsch. für Klin. Med.*, iv., 4, p. 605, 1882, reports four cases, one of them, in a man forty years of age, coming on after protracted mental overwork, and ending fatally. I have had two well-marked cases of the kind under my charge, both concerning young women, in the etiology of which menstrual disturbances played an important part. Ice applications, morphine injections, and the blandest possible diet failed to bring relief. But after raising a blister over the stomach, putting neither food nor drink into it, and supporting the patients by rectal alimentation for some days, improvement and final recovery took place. Constipation and diarrhœa, hyperesthesia and neuralgia of the stomach, are quite frequent in neurotic females, particularly when they have uterine trouble. In neurasthenic men, diarrhœa, quite independent of catarrh or other local causes, is not very rare. An interesting and obstinate case of periodical attacks of nervous diarrhœa has been under my observation for some years. F. S——, about forty years of age, a merchant, the father of healthy children, of strong constitution, excessively nervous, showed the first symptoms of the disorder eight years ago, while engaged in active and difficult business. He has been carefully examined by myself and others, and had the counsel of eminent specialists. But no one has arrived at an anatomical diagnosis in his case; a nervous origin of it is almost certain, the more so as his father, who is still alive, has been suffering from the same trouble for many years.

Various modes of treatment have given but temporary relief, the attacks growing rather more severe and persistent as time goes on, and are frequently complicated by vomiting and gastralgia. Having found that he can make himself more comfortable by morphia than by any other remedy, the patient has of late become somewhat of a morphine-eater. The rather frequent and more readily tractable forms of nervous dyspepsia, etc., we may designate, with R. Burkart, as gastric neurasthenia. The difficulties and discomforts experienced while digestion goes on, constitute the principal complaint in these cases. All other intercurrent symptoms depend upon the exacerbation and remission of the former.

Such other cerebro-spinal symptoms are headache, vertigo, cardiac palpitation, backache, depression of spirits, disturbed sleep, etc. This array of symptoms gives us a clinical picture quite different from the symptomatology of catarrh, carcinoma, or gastric ulcer.

There is often a sensation of fulness and pressure in the epigastric region, frequent eructation, occasional vomiting, tympanites, and flatulency. Sometimes there is anorexia, and again ravenous appetite; bowels generally irregular, alternately loose and constipated.

R. Burkart, in an excellent monograph on "Neurasthenia Gastrica," Bonn, 1882, describes a new symptom, *i.e.*, hyperæsthesia of the abdominal ganglia of the sympathetic. He has found it in almost all his cases of neurasthenia gastrica, and mentions three localities for examining for the tender ganglia: 1. Plexus hypogastricus. The patient being in the horizontal position, pressure is made with two fingers of both hands in the median line, below the umbilicus and a little above a line that would connect the spin. oss. ilei, perpendicularly downward against the vertebral column. In neurasthenia gastrica we shall find in this way an exquisitely tender spot, from which painful sensations will radiate downward and particularly upward. A feeling of oppression will sometimes come over the patient while the pressure lasts. A second place corresponds to the plexus cœliacus; but pressure over that discloses less hyperæsthesia, and reflex symptoms are absent. Finally, the plexus aorticus may also be the seat of hyperæsthesia. Per contra, he has not found any hyperæsthesia of the above ganglia in neurasthenia without gastric symptoms, nor in cases of anatomical disease of the gastric intestinal tract.

The disproportion between the objective signs and the numerous complaints is quite characteristic, and the discomfort is sometimes greater when the stomach is empty than when it is full. While diet has no great influence, emotion, worry, and excitement, and intellectual or physical overwork have so much the more in precipitating an attack. The condition of the patient is variable; there are periods of great distress, followed by partial or complete well-being.

The morbid influences most potent in producing gastric neurasthenia are: acute diseases, intellectual overwork, great emotion and excitement, hereditary neuroses, and the various sins of civilized life. The prognosis of this class of cases is generally favorable. Therapeutically they need generous quantities of nutritious food, good air, and particularly mountain air, and ought to follow a suitable regime in sexual indulgence, and in mental and physical occupation. Bitter waters and saline purgatives in general are contra-indicated, according to my experience. The waters of Saratoga, Carlsbad, and similar places do harm, and the more so, the stricter the diet that has been observed while using them. I have seen patients of that class come back from Carlsbad worse than they were before they went. Hydrotherapeutics in the shape of tepid half-baths with cold affusions, or the wet sheet with friction of the whole surface of the body, are often of service, and so is massage, generally and gently applied. Galvanism applied every other morning to head, spine, or sympathetic, according to the indications of the case, is frequently of good influence. Of drugs I am in the habit of prescribing small doses of an acid solution of the comp. hypophosphites between meals, more than anything else. They are generally well borne by the stomach, and I consider them a good tonic for a neurasthenic person.

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MINERAL ASTRINGENTS AND CAUSTICS IN OPHTHALMIC PRACTICE.[1]

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The motive of this paper was suggested to me by remarks made by a member of this Society, some time ago, relative to the use of various mineral astringents and caustics in the treatment of eye diseases. It occurred to me that it would not be amiss to offer the present views of their use, with special reference to nitrate of silver, as a monthly contribution, and to endeavor to differentiate their position in ophthalmic pharmacology.

Conjunctivitis.

The different forms of conjunctivitis may be classified as *catarrhal, vernal, follicular, granular, blennorrhöic, croupous, diphtheritic*, and *phlyctenular*.

a. Catarrhal conjunctivitis, or conjunctivitis simplex.—The general characters of this affection are increased hyperæmia of the conjunctiva and increased secretion. The hyperæmia is often very pronounced; the secretion is purely catarrhal, consists of mucus, epithelium, and fat-cells, is a trifle opaque, viscid, and when it becomes dry the lid-edges are disposed to stick together.

Every abnormal secretion of the conjunctiva, produced by inflammatory processes, is to be regarded as contagious.

A simple catarrhal conjunctivitis is not always amenable to treatment; it may become chronic; or it may produce lymphatic infiltration in the vicinity of the culde-sac; or it may involve enough of the under-lid to create an eversion of the lachrymal puncta; or there may be an ulcerative blepharitis, or a secondary trau-

[1] Read before the Northwestern Medical and Surgical Society, April 18, 1884.

matic keratitis. Such are some of the members of the vicious circle possible to every acute catarrh of the conjunctiva.

As regards the use of nitrate of silver in the different forms of conjunctivitis, Graefe [1] elaborated the principles to be carried out in a masterly paper on diphtheria of the conjunctiva. His work in this direction rehabilitated the caustic from the disrepute into which it had fallen. The empirical use of the silver-nitrate is unnecessary, inasmuch as its indications in different forms of conjunctivitis are tolerably precise. Some of these indications I desire to note here:

1. The use of silver-nitrate always presupposes an increased flow of blood to the conjunctiva, with a certain amount of succulence of tissue and serous exosmosis; and the more pronounced the hyperæmia of the membrane with its secondary developments, the more, *cæteris paribus*, is the nitrate indicated.

2. Silver-nitrate is not indicated in any form of conjunctivitis attended by a fibrinous, easily coagulable secretion, so long as this kind of secretion persists. It frequently happens that blennorrhöic affections of the conjunctiva have an initial stadium, in which the secretion is easily coagulated when the superficies of the membrane is smooth and glistening on account of a highly injected mucous membrane. To apply the silver-nitrate on such a membrane would be to impair its integrity, to increase the fibrinous exudation, and possibly to induce a severe disease of the cornea.

3. Silver-nitrate is contra-indicated in deeper inflammatory processes of the eye, as, for instance, in certain diseases of the cornea.

4. The strength of the nitrate must be in proportion to the intensity of the inflammatory changes of the conjunctiva; that is to say, a severer grade of conjunctival inflammation demands a stronger solution of the nitrate. These solutions vary from a half to one and a half per cent.

5. The strength of the nitrate must be reduced in proportion to the disappearance of the inflammation.

6. An eschar forms after the application of the nitrate, under which regeneration of the disturbed tissues takes place. The nitrate should not be reapplied until after the regeneration of the tissues.

7. The influence of the nitrate upon other tissues should be prevented; for this purpose either simple water should be used to wash away the resulting silver-albuminate, or with stronger solutions of silver a solution of common salt should be used.

The details of application need not be given here. It is sufficient to note that silver-nitrate is the astringent to be used over all others in *catarrhal conjunctivitis*.

b. Vernal conjunctivitis.—This is an endemic form of catarrh, showing itself in the spring. It is confined to the limbus conjunctivæ and to the adjacent part of the bulbar conjunctiva. As a rule, there is no excess of secretion, and the affection is to be regarded as a chronic conjunctivitis. The membrane is of a dirty red or a lustreless pink color; it lacks the freshness and vitality peculiar to other forms of conjunctival injection. This is probably due to a serous infiltration which occurs in irregular spots under the conjunctiva. The disease is marked by unusual photophobia.

To the inexperienced practitioner there is a great temptation to use the silver-nitrate, but it will only increase the symptoms, and thereby possibly endanger the cornea. In the event of a discharge, a weak solution of silver-nitrate, as one per cent., could be used with benefit. The photophobia must be regarded, however, as contra-indicating the use of silver; such metals as zinc or lead would be preferable.

c. Follicular conjunctivitis, properly named from the development of superficial, globular, pale-red prominences, which accompany catarrhal inflammatory changes in the conjunctiva, and which latter, on subsiding, carry away with them quite every vestige of follicular growth. Follicular differs from simple catarrh in this development of follicles. Like simple catarrh it has a secretion mild in character, while, unlike it, the follicles may be regarded as lymph-follicles; that is to say, their structure is that of the closed lymph-sacs, while the smaller, smooth, whitish bodies may be regarded as collections of lymphoid elements. To carry out the analogy between the follicular and catarrhal forms, it is to be said that the development of follicles protracts the course of a conjunctivitis, renders it more obstinate to absorption processes, and more disposed to a recurrence; on the contrary, there are not the inflammatory changes in the deeper tissues of the lid in follicular conjunctivitis which obtain in granular conjunctivitis.

Secretion of an acute follicular is more contagious than of a simple catarrh of the conjunctiva. This is the form usually found in the different members of a family, in schools, barracks, etc., though other causes may conspire to extend the eye disease, chief of which is the bad ventilation of such inhabited rooms. Among the causes of follicular conjunctivitis is to be reckoned the traumatism due to a long-continued use of irritating remedies, such as different mercurial ointments applied within the lids, so much in vogue in South Germany, atropine, etc. Although atropine may have been used for weeks without any conjunctival reaction, suddenly, without any warning, a follicular inflammation of the conjunctiva may be developed, with marked injection and œdema of the lower lid, which latter may extend to the lid border, and eventuate in a blepharitis, or may go over on the integument of the lid and cheek, amounting to a dermatitis miliaris. One peculiarity of atropine-conjunctivitis is its long duration and resistance to treatment; these characteristics are entirely independent of the length of time atropine has been already used, whether long or short.

As to the management of cases of follicular conjunctivitis, it is to be observed, that while silver-nitrate is the astringent of all others to be relied on, it is, however, not to be used early in the case. Antiphlogistic measures are first to be resorted to; such as ice-cloths, of one thickness of a square of old muslin, transferred from raw ice to the eye; scarifications, if the lid is hyperæmic and swollen, made parallel to the fold of the lid; while later, and not until the incisions have healed, the silver-nitrate, not stronger than one per cent. It goes without saying, that all such cases must be eliminated of their hygienically bad relations, placed in new rooms, or, at least, in freshly fumigated old rooms, as when the treatment is conducted in the wards of a hospital, the dormitories of lodging houses, boarding-schools, etc.

d. Granular conjunctivitis.—The general characteristics of this form of conjunctivitis are so well known that it will be hardly necessary to enter into a detailed explanation of its pathological exhibits; it has various forms, which are arranged under different names, and require different plans of treatment according to the different stadia of the pathological process. The terms *granulations*, *trachoma*, etc., imply technical states and qualities of the granular and granulating process. An analogy is often drawn between this and the follicular form of conjunctivitis; but the similarity is external and superficial, and is based upon the fact of the formation of prominences on one and the same conjunctival tissue. The follicles in the one variety are purely superficial, and disappear without leaving a trace of their existence; while the granulations are formed from the cellular tissue layer, push the epithelium before them, and leave a cicatrix where they previously rested. Viewed in this way, granulations belong to the neoplastic growths, as does a true granuloma. Further, granular conjunctivitis—that is, granulations—may exist not only on the palpebral, but also on the bulbar conjunctiva, and may extend even to the limbus of the cornea; while it is well known that no papillæ exist in these last two locations.

[1] Von Graefe: Arch. f. Ophthal., vol. i., part i., pp. 168–250.

It is not to our purpose to dwell on the different subdivisions of granular conjunctivitis, as the acute, the simple or chronic, and the cicatricial, nor to go further than to mention some of the possible vicious complications, as *e.g.*, contraction and bending of the tarsus; dryness of the conjunctiva, or *xerosis;* diseases of the tear-passages, as stenosis, stricture, and imflammation of the lachrymal sac, eversion of the inferior punctum, and ectropion of the inferior lid; changes in the lashes, as malposition and improper growth; and lastly, diseases of the cornea.

The secretion of granular conjunctivitis is contagious; the contagion depending on the secretion itself, and not on the granulations. The secretion of the acute is contagious in a higher degree than that of the chronic form. Arlt has stated that there was a legitimate connection between scrofula, or tuberculosis, and trachoma; but every practitioner knows that granular conjunctivitis frequently develops in robust and perfectly healthy individuals; also, that impoverished persons contract it as well as those well fed. Inhabitants of high altitudes are less liable to its attack and severity than dwellers in low and damp districts. Finally, granular conjunctivitis attacks individuals of ten to thirty years of age most frequently; during the first and after the forty-fifth year an initial attack is seldom observed. It is a disease of the poor people, and not of those in good circumstances and in the practice of decent hygiene.

As to the therapeutics of granular conjunctivitis, the acute form is best treated, from the indicative inflammatory symptoms, by cold applications, scarifications, and later by astringents; while the simple or chronic form is best treated by astringents. Should corneal affections develop, as the result of persistent, pericorneal injection, in the form of acute infiltration of the periphery of the cornea, or as abscesses, the treatment must be limited to atropine, and every kind of caustic be abandoned. For the final stage of an acute granular conjunctivitis, after inflammatory symptoms have been removed by cold, and the serous infiltration by scarifications, the best caustic to be employed is nitrate of silver, in solution, one to one and a half per cent.; but in the chronic form, the astringent to be relied upon beyond all others is the sulphate of copper, the copper-stick or blue-stone, as it is popularly known. It is enough merely to mention that removal to pure, dry air, cleanliness, freedom from dust and smoke, and, if in a hospital, the limitation of patients to the more open and better ventilated parts of the ward, must be insisted upon; if, too, in a hospital, such patients ought not to be allowed to converse at the bedside of others who have had intra-ocular operations, such as those convalescing from extraction of cataract, iridectomy, or paracentesis; nor, on the other hand, should they be allowed too close proximity to open wounds, erysipelas, pyæmia, and puerperal fever. The same precautions, though in a more emphatic sense, should be insisted upon with hospital patients under treatment for the various forms of blennorrhöic conjunctivitis, such as the purulent ophthalmias of the adult and newly-born, diphtheritic conjunctivitis, etc. Though at the risk of being criticised for a digression, I take great pride in noting that for the last four years of operative work in the ophthalmic wards of Charity Hospital, not a single operation has been endangered by the presence of trachomatous patients; and, as is well known, granular conjunctivitis abounds in the ophthalmic division of the hospital, sometimes *ad nauseam*.

Neither the purpose nor the limit of this paper will allow anything more than a reference to the cicatricial stage of granular conjunctivitis; it is properly a stage of contraction and distortion of the tarsal ligament and lid, or a stage of deformity, and for which treatment is chiefly surgical. The operations for blepharophimosis, as canthoplasty, cantholysis, etc., the different procedures for the relief of ectropion of the lid, eversion of the punctum, reposition of the cilia, trichiasis, and distichiasis, as also for stenosis of the tear-sac, stricture, etc., can here be merely alluded to. They are operations naturally relegated to the specialist, some of which belong to the nice calculations of cosmetic surgery.

e. Blennorrhöic conjunctivitis.—It is characterized by the generation of a well-marked purulent secretion from a highly vascularized membrane, infiltrated with serum, and covered with granulations. The secretion is its chief differentiating factor. There are two varieties of blennorrhœa—acute and chronic. An acute blennorrhœa is usually binocular (double-sided). It first shows itself in reddened and partially swollen lids. The swelling can involve a part or the whole of the lid—can extend to the bridge of the nose, and may be of such amount that the upper lid can be raised with difficulty, and the palpebral slit be seen scarcely at all. A smoky, thinly fluid, copious secretion begins early to course from the palpebral opening, capable of being drawn out in elastic threads. So strongly injected is the conjunctiva, both palpebral and bulbar, that frequent *apoplexies* result; the injection and infiltration may extend up to the cornea, even overhang it, and limit its diameter; this condition of strangulation of conjunctival vessels is called *chemosis*, and on eversion of the lids a thick welt of bluish-red tumor is seen between them. So soon as this glistening, distended mucous membrane is exposed to the air, the thin exudation is quickly followed by a new discharge. A burning heat with severe pain in the eyes and brows accompany the inability to open the eyelids, while the crypts between and underneath the false folds of conjunctiva are choked with a rich exudation of a highly contagious, purulent discharge. Subsidence of infiltration takes place in a few days; the secretion diminishes in quantity, but becomes more consistent, and wells up like a whitish-yellow cream. After continuing from two to three weeks the inflammatory symptoms begin to disappear, the lids can be more easily opened, the secretion becomes more mucous, the injection, infiltration, and granulations subside *graduatim*, and in from six to eight weeks the main elements of this special disease have disappeared. This long-continued pressure on the (anterior) ciliary arteries tends to impair the integrity of the cornea, and to produce secondary affections of that tissue. There may follow this stasis either superficial ulcerations at the periphery, or deep pus-dépôts in any part of the cornea, with abscess and perforation, iris-prolapse, traumatic iritis, etc.

Chronic blennorrhœa differs in the degree of primary inflammatory symptoms, the secretion is more mucopurulent in character, and easily dries on the lashes. More than in the acute form, granulations develop, and ultimately may lead to shrinkage of tarsus and ectropion. The chief anatomical changes in blennorrhœa consist of the thickening of the stroma of the conjunctiva, the distention of the vessels, and the thickening of their adventitia. A simple conjunctival catarrh may eventuate in a blennorrhœa; a conjunctivitis, not originally catarrhal, may eventuate in a blennorrhœa; as, for instance, an acute granular conjunctivitis, or a croupous or diphtheritic form. In fact, a true diphtheria of the conjunctiva, while itself rare, usually ultimates in a blennorrhœa.

The most common cause of a blennorrhöic conjunctivitis is the conveyance of a similar secretion from any mucous membrane, either of the patient or of another person, and that mucous membrane may be conjunctival, vaginal, or urethral. This contagion may be conveyed by actual contact, or by transmission through the air. Further, the daughter-conjunctivitis will not necessarily be the same as the mother-conjunctivitis.

The management of blennorrhœa must be conducted on two lines: 1, protection; 2, therapeusis. It is of the highest importance that, in case the affection is of one eye, the other should have a protective bandage; that in every case the greatest precaution should be taken against the possibility of a conveyance of discharge to the attendants. Towels, sponges, and compresses should

never be twice used without thorough cleansing and disinfection, and applicating cloths should be burned. Treatment proper should be guided by the phase of the process, by the character of the mucous membrane and the secretion, and by the corneal implication, if any be present. The following general rules should be followed: 1. If the mucous membrane be smooth and shiny, and covered with a thin and transparent or slightly cloudy exudation, or if there be a thin and fluid secretion of a gray or light yellow color, cold applications must be used, while caustics must be avoided. 2. If the tissues are swollen or chemotic, scarifications must be made, followed by cold applications. 3. If granulations—that is, papillary bodies in folds—have developed, if the lid-swelling has begun to subside, if there be not a thin, glairy exudation, but, on the contrary, a thick yellow-homogeneous secretion, then caustics are indicated. 4. If the cornea be involved in the last picture of granulations and discharge, then caustics are indicated, because so long as they successfully fulfil their indication the progress of corneal disease is abated.

There is, perhaps, no conjunctival disease in which the caustic treatment meets with such eminent success as attends its adoption in proper time and strength in blennorrhöic conjunctivitis. It is a fundamental principle that the strength of the caustic must be proportioned to the intensity and development of the inflammatory processes; at the same time the caustic must be used at the beginning weaker than the grade of the inflammation would indicate, and may be strengthened little by little as the mucous membrane shows a tolerance. In this regard is shown the judgment of the practitioner, to preserve the balance of power, so to speak, on the side of the disease and not on that of the caustic, as it is always easier to increase the strength of the latter, if required, than to combat the injudicious effect of a too powerful caustic. Among the possible bad effects of too powerful astringent treatment is the destruction of the corneal epithelium, perhaps already undermined by the blennorrhöic processes. Solutions should average of the strength of one to two per cent. Corneal disturbances, as simple or necrotic keratitis, abscess, or keratitis profunda, are to be treated with atropine, one-half to one per cent; as corneal involvements are usually sequels of the acute inflammatory stage, caustics will have been resorted to, and their use may be continued, but with care.

In this category belongs the blennorrhœa of the newly-born, of which but little need be said, as it is easily recognized by the character of the discharges and its appearance in two or three days after birth. It is a strange statement, and to some may be new, that not every case of blennorrhœa of the infant is developed from a blennorrhœa of the vagina of the mother; but without doubt the majority of the cases do so develop. I have treated many cases of blennorrhœa, beginning within forty-eight hours of birth from no traceable cause, in which at no time was there a discharge greater than what might occur in a mild catarrhal conjunctivitis, and which came to good recovery in a few days under mild caustic treatment and cleanliness. In the blennorrhœa of the newly-born, as in that of adults, the same question arises as regards the continuance of the caustic treatment during corneal complication, such as keratitis profunda, abscess, etc.; it may be emphasized on the part of infantile blennorrhœa, that such treatment is not only not contra-indicated, but, on the other hand, may be pursued with advantage. The surgical measures necessary in abscess of the cornea, as puncture, and removal of a prolapsed iris, will only be mentioned here.

The forms of conjunctivitis known under the generic heads of croupous and diphtheritic need not claim our attention; they are rare, even in a large special practice, are not necessarily coincident with croup or diphtheria of the air-passages, and do not indicate caustics as an *essential* element in treatment. Caustics, however, are to be used after the pseudo-membrane has been removed, and the process becomes a secondary blennorrhœa.

The last variety of conjunctivitis to claim our notice at this time is the

f. Phlyctenular.—It is introduced here by way of negative argument as to caustics; that is to say, they are not to be used in any stage. A brief summary of its characteristics should be given. One of the most common of all ophthalmias, and chiefly among children before their fifteenth year, it is begotten in scrofula, bad hygiene, or poor living; it is limited to a small portion of the bulbar conjunctiva between the corneal periphery and the cul-de-sac; it is known by its pimple or bladder-like prominences, which may be single or multiple; the phlyctens or swellings may become abscess-like, and may form—to use an anomalous expression—an elevated ulcer. The disease has a peculiar tendency to extend itself in the form of phlyctens upon the cornea, even to the centre of its face. Patients with phlyctenular conjunctivitis have such scrofulous exhibits as the following: eczematous and impetiginous eruptions in the vicinity of the lids, at the nasal angles, on the upper lip, behind the ears, and on the hairy portions of the body; glandular swellings, other mucous catarrhs, etc. Phlyctenular conjunctivitis is not contagious, as are the diseases already described. Frequently no abnormal secretion attends it; on the other hand, it is to be noted that the phlyctenular form is a frequent sequel of other diseases in other parts of the organ—such as blepharitis in scrofulous subjects, disturbances of the tear-passages, episcleritis, etc.

The treatment in brief follows these lines: 1. Iron and cod-liver oil; a proper diet and hygiene to combat any possible scrofula and the tendency to blood-impoverishment, of which this disease is an index. 2. Irritation by calomel, and by ointments of the red or yellow mercurial oxide placed within the lids. 3. The avoidance of all derivatives and depressants. 4. The continuance of topical remedies long after all inflammatory changes have passed away. For the photophobia, always present, and which in children is known by the peculiar manner in which they blink at you from under the bent arm, the sovereign remedy is ducking the face in cold water.

Finally, in connection with the treatment of mucous membranes by the silver-nitrate, it should be noted that the excessive use of this salt produces a discoloration called *argyrosis*, or a silvering of the papillæ of the corium. While this is a frequent result of the internal use of silver, as for epilepsy, chorea, etc., it is quite rare as due to topical application. Professor Neumann, of Vienna, once showed the author of this paper a section of the lower lid in a condition of argyrosis, which in a bright light gave the beautiful lustre of veins of silver where the papillæ of the corium were discolored by the silver-nitrate.

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Eczema and Trophic Centres.—Dr. F. A. Groat, of Fremont, O., writes: "In an article in The Medical Record of March 15th the question is asked, 'Is congestion of the trophic skin-centres the cause of eczema?' Since reading that article I have met with a case of vesicular eczema which seemed to be peculiar, in that it was developed only over the superficial muscles of both hands supplied by the ulnar nerve; making its appearance with the advent of warm weather, for six consecutive years, only upon these muscles, and never having been benefited by treatment, local or internal, alone or in combination. The man was unusually well developed physically, with no apparent indication of disease, unless obesity be pathological, and no local cause for the eruption to be found. If from congestion of the nerve-centre, would it manifest itself only in muscles supplied by terminal branches of the nerve?"

THE LAWS OF DISSECTION.

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The laws of most of the United States, and of England as well, provide for the lawful dissection of human bodies in the interests of medical science. These laws are, most of them, of recent origin, although the first enactment in England was passed as early as 1540, in the time of Henry VIII. It was then declared that the Masters of the Mystery of Barbers and Surgeons might take each year four persons executed for felony, for anatomies, and to make incision of the same dead bodies, or otherwise to order the same after their dissections at their pleasure, for their further insight and better knowledge, instruction insight, learning and experience in the science or faculty of surgery.

In 1565 Queen Elizabeth allowed the College of Physicians similar privilege of dissecting annually four felons. In 1752 George II. permitted the bodies of all murderers executed in London and Westminster to be delivered to the surgeons for anatomical purposes. Notwithstanding these enactments, the supply of bodies for dissection was not sufficient for the demand, and numerous attempts were made by grave-robbers to meet the wants of medical students. In 1830, the act known as the Anatomy Act was passed, and it is in pursuance of its provisions that the medical profession in Great Britain now secure material for dissection and instruction. This act provides for the licensing of persons practising anatomy, and establishes inspectors of the various schools. The principal section of the act is as follows: "It shall be lawful for any executor, or other party having lawful possession of the body of any deceased person, and not being an undertaker or other party intrusted with the body for the purpose only of interment, to permit the body of such deceased person to undergo anatomical examination, unless to the knowledge of such executor or other party such person shall have expressed his desire, either in writing at any time during his life, or verbally in the presence of two or more witnesses during the illness whereof he died, that his body after death might not undergo such examination, or unless the surviving husband or wife or any known relative of the deceased person shall require the body to be interred without such examination." This act in its preamble declares that the legal supply of human bodies for such anatomical examination is insufficient fully to provide the means of such knowledge, and its effect, as stated by Justice Stephen in Queen *v.* Price, L. R., 12 Q. B. Div., 247, has been "that the bodies of persons dying in public institutions whose relations are unknown are so dissected." The duty of properly interring the remains after dissection is placed upon the persons giving the bodies to the physicians.

In New York the first law on the subject was passed in 1854, and it has been amended by legislative enactments passed in 1879, 1881, and 1883. The law as it now stands is clear, distinct, and satisfactory in its working. It is as follows: "It shall be lawful for the governors, keepers, wardens, managers, and persons having lawful control and management of all public hospitals, prisons, alms-houses, asylums, morgues, and other public receptacles for deceased persons, to deliver, under the conditions hereinafter mentioned and in proportion to the number of matriculated students, the bodies of deceased persons therein, to the professors and trustees in all the medical colleges of this State authorized by law to confer the degree of doctor of medicine. And it shall be lawful for the said professors and teachers to receive such bodies and use them for the purpose of medical study. Medical colleges which desire to avail themselves of the provisions of this act shall notify said governors, keepers, wardens, and managers of public hospitals, penitentiaries, alms-houses, asylums, morgues, and other public receptacles for the bodies of deceased persons in the counties where the colleges are situated, and in counties adjacent thereto, of such desire, and it shall be obligatory upon said governors, keepers, wardens, and managers to notify the proper officer of said medical colleges whenever there are dead bodies in their possession that come under the provision of this act, and to deliver said bodies to said colleges on their application. Provided, however, that such remains shall not have been desired for interment by any relative or friend of such deceased person within forty-eight hours after death; provided, also, that the remains of no persons who may be known to have relatives or friends shall be so delivered or received without the assent of such relatives or friends; and provided that the remains of no person detained for debt, or as a witness, or on suspicion of crime, or of any traveller, or of any person who shall have expressed a desire in his or her last illness that his or her body be interred, shall be delivered or received as aforesaid, but shall be buried in the usual manner; and provided, also, that in case the remains of any person so delivered or received shall be subsequently claimed by any relative or friend, they shall be given up to said relative or friend for interment; and it shall be the duty of said professors and teachers to dispose of said remains in accordance with the instructions of the Board of Health in said localities where such medical colleges are situated, after the remains have served the purpose of study aforesaid. And for any neglect or violation of the provisions of this act the party so neglecting shall forfeit and pay a penalty of not less than twenty-five nor more than fifty dollars, to be sued for and recovered by the health officer of said cities and places for the benefit of their department."

The great demand for bodies for dissection early outran the supply, as has been stated, and the art of the resurrectionists began to be developed. In the year 1788, forty-four years before the passage of the British Anatomy Act, the case of Rex *v.* Lynn, 2 T. R., 733, was tried. It was one of the first cases of the kind in the books, and puzzled the lawyers very much, notwithstanding the fact that the general subject of rights over dead bodies had been discussed by the text writers. In that case Lynn was indicted for a misdemeanor in disinterring a body for the purpose of dissection. It was urged on his behalf that the offence was only cognizable in the ecclesiastical courts, but the judges of the King's Bench declared that it was a fit matter for a criminal court, and said that common decency required the practice to be stopped, "being highly indecent and *contra bonos mores*, at the bare idea alone of which nature revolted." As the judges, however, thought that Lynn might have committed the act through ignorance, he was only punished by a fine of five marks. In some later cases the punishment was made severe, and at the present time there would certainly be no leniency shown to any one who removed a body unlawfully. In Regina *v.* Sharpe, 1 D. & B., 160, it was held to be a misdemeanor to disinter a body at all without proper authority, even when the motives for the act were laudable, it appearing that a son disinterred his mother in order to bury her in his father's grave in consecrated ground, but he was able to do this only by the use of a false pretence. The difficulty which the lawyers had in fixing the grade of the offence came from an inability to decide that a dead body could be property and the subject of theft.

Willcox, an old writer upon the laws of the medical profession, says that the whole question of the lawfulness or unlawfulness of taking bodies for dissection depends upon the answer to the questions: "Is it a violation of property? Is it a personal injury to any individual? Or is it an injury to the public? Every lawyer who has mentioned the subject has admitted that there is no violation of property in respect to the corpse itself, which is necessary to constitute the removal an offence; and Blackstone has distinctly stated that the only property violated is the grass and soil of the land wherein the body was interred, in respect to which the person may bring

his action of trespass, but the law has not provided any punishment as for an offence. It is equally clear that it is not an injury to any person; for the shrewd lawyers of Coke's time determined that the body was no person, but a lump of clay; and the only injury which can give a right of action to that, which amounts to a violation of any legal right of a relative or master, is such as may be said to recoil upon him by causing him expense, labor, or loss of valuable service." The theory of the early cases, such as that of Lynn, seems to be that the offence is one against the public, but this opinion is not now maintained against the abstract question of the use of bodies for dissection. It is no longer considered that any offence is committed against the person, against the public, or against property in dissecting the human body, provided this be done decently, for scientific or medical purposes, and in the mode prescribed by law. In the recent well-known case of Queen *v.* Price, decided by Justice Stephen, in Wales, no later than February, 1884, where it was held that cremation was a legal mode of disposing of the bodies of the dead, this language is used: "The law to be collected from these authorities seems to me to be this: The practice of anatomy is lawful and useful, though it may involve an unusual means of disposing of dead bodies, and though it certainly shocks the feelings of many persons, but to open a grave and disinter a dead body without authority is a misdemeanor, even if it is done for a laudable purpose." It was claimed in this case that the common law gave the *right* of Christian burial to every person, and that consequently cremation was illegal, especially if not directed by the deceased; but Justice Stephen held that the expressions implying a *right* of burial were used at a time when cremation was not conceived of as possible in England, and consequently no special importance is to be given to the words touching the lawfulness or otherwise of cremation. The same argument, if valid against cremation, would hold good in considering the question of dissection, for if Christian burial is a right and duty, it would preclude all use of bodies for anatomical purposes.

Following the English common law, the several States of this country have united in regarding the violation of tombs an indictable offence, and the intended purpose of the robbery, if it is dissection, does not mitigate the criminality of the act. In New York, for instance, removing dead bodies for the purpose of selling the same, or from mere wantonness, is punishable both by fine and imprisonment.

When the robbery of Mr. Stewart's grave occurred, some years since, it was thought by many persons that the law was powerless to punish the scoundrels if caught, but there would have been no trouble on this point. It is not at all likely that their object was dissection; it must have been to obtain the reward for the return of the body which they knew would be offered, and this would certainly come under the provision of the law forbidding the removal of dead bodies for the purpose of sale. In New Hampshire and Vermont the punishment for this crime may consist of fines, whipping, and imprisonment.

Actual presence at the time of the body-lifting is not essential to a conviction; but a person directing the proceeding, and near enough to give aid and assistance if required, can be punished as well as those actually opening the grave (Tate *v.* State, 6 Black, 111).

The considerations thus far produced treat only of the criminality of grave-robbery; some civil remedies for the same offence will be touched on at a future time.

A Foreign View of a New York Practice.—A Berlin medical journal publishes the following: "Dr. Beach(!), one of the first surgeons of New York (!), is living here at present. This gentleman has gained by his practice property to the amount of $5,000,000 (!). We are of the opinion," adds the editor, "that it is the specialists who are in the best way to accomplish these material results." It may be asked if the above paragraph is not part of a scheme to flood New York with Berlin specialists.

PSEUDO-BULBAR PARALYSIS.

Bilateral Apoplexy of the Lenticular Nuclei, Simulating Lesion in the Floor of the Fourth Ventricle.

By S. E. FULLER, M.D., and WM. BROWNING, M.D.,
BROOKLYN, N. Y.

It has not been thought possible as yet to include injury of the lenticular nuclei among the forms of brain disease which admit of approximate localization. A limited number of cases have, however, accumulated which seem to indicate that an insult to both these nuclei, and perhaps to only one, may produce a picture of its own.

Since, however, these bodies are, from statistics, a very frequent seat of apoplexy, and besides entirely latent foci have been found in them at the autopsy, it is probable that the special symptomatology observed in the other cases may have been caused, not by the lenticular injury itself, but by an extension of it or its effects to adjacent parts. Be that as it may, that injury of these bodies may produce a very well-marked and peculiar group of symptoms is shown by the following case. It occurred in the practice of Dr. Fuller, and was seen in consultation by Dr. McNaughton. The interest of the case was fully recognized and pains were taken to observe all symptoms. The clinical history is furnished by Dr. Fuller; the results of the autopsy are by Dr. Browning.

A lady, M. J——, aged sixty-one, had suffered three years previously a left hemiplegia without aphasia. Face, throat, and neck muscles reported to have been unaffected. Further particulars of the immediate attack unknown. She recovered from it fully. Toward the end of convalescence she came under my (Dr. Fuller's) care complaining of a severe burning sensation in the sole of the left foot. This was remedied with ergot and bromides. There were no premonitions to the present attack. It came on about 4 P.M., July 16, 1884, while in the bathroom. She is said to have called out to a lady in the next room, saying she was very dizzy and had pain in her head, the lady helped her to bed. There seemed to have been no loss of consciousness on the patient's part.

Upon my arrival she was speechless, and remained so. It was only possible for her to make an expiratory guttural sound. Having been paralyzed before, she immediately proceeded to show me that it was not the same by raising first the right arm and leg and then the left. The lips, tongue, and muscles of deglutition were paralyzed; the saliva flowed from whichever angle of the mouth was lowermost; the upper portion of the facial nerve was functionally intact and the pupils reacted normally. She could not open her jaws, or only to the slightest extent. The lower jaw could be readily depressed with the finger, but on attempting to swab out collecting mucus from the oral cavity and throat—as was often necessary—the jaws would close and press on whatever had been introduced into the mouth, despite the strongest desire of the patient to keep them open. The nurse had to be instructed, before cleansing the mouth, to wrap a blade in soft material and place it edgeways, so as to keep the jaws apart until the little procedure was finished. This symptom persisted during the conscious life of the patient. The tongue was quite motionless. The urine had been examined some time previously, and found free from albumen.

Immediately subsequent to this attack, there was an enormously increased flow of urine. In the first three hours she passed water three times. Though not measured, it was estimated by the attendants to have been a quart each time. In this urine there was about twenty vol. per cent. of albumen and once a trace of sugar with Fehling's test. Within twenty-four hours the quantity of urine returned to normal. Albumen persisted in it for a time at least. She snored very loudly after the attack, though not doing so previously. There was no trouble from the soft palate when awake, although it hung in a paralyzed condition.

So long as she remained conscious, *i.e.*, for the first

five days, she always gave notice of desire to defecate or urinate—no incontinence whatever. During the same period she would often motion for spectacles, paper, and pencil, indicating that the latter be first moistened in the mouth. She would then communicate by writing her questions, and showed the full possession of her mental faculties. This was farther shown by her remembering when medicine was due (given per rectum and hypodermically), by directing attention when a sample of urine had been forgotten, and in a variety of other ways, *e.g.*, curiosity as to the nature and cause of her own condition. She would, however, cry rather easily, the tears then running silently down over the cheeks. This could hardly be wondered at, or considered as loss of control over the feelings.

It is very doubtful if she succeeded in swallowing anything, though she tried hard to do so. She was successfully nourished with peptonized milk, etc., per rectum.

The sterno-cleido and other large neck-muscles did not appear to be affected. The sense of hearing remained good, and, in fact, no anæsthesia of any part of the body was discovered.

The pulse, respiration, and temperature showed no disturbance to within forty-eight hours of death. At this time, after some extra exertion on her part, she gradually sank into a stupor. Some twelve hours before the end she became very much flushed and hot to the touch over the whole body. This afterward gave place to a kind of collapse. Death on the morning of July 23d.

Post-mortem in the afternoon, with the assistance of Drs. Fuller and McNaughton. The autopsy being permitted only on condition that nothing whatever be carried away, it was impossible to make a minute examination of any of the parts, yet this could not have added very materially to the exactness of the present case. Only the brain was removed, including the cord to opposite the second cervical vertebra.

The cerebro-spinal fluid was slightly increased. The vertebral and carotid arteries with their branches on the base of the brain presented numerous patches of atheroma, but were, at least in all their larger divisions, still permeable. No farther abnormal appearances on any portion of the surface of the brain.

The lateral ventricles presented nothing unusual, unless some slight adhesions between the ependyma of the ventricular roof and floor. Laterally in the brain-substance, on the two sides very nearly symmetrical, were two fresh clots. These were in the lenticular nuclei, extending into all three divisions and tapering off posteriorly.

On the right side, in front of and external to the recent hemorrhage, were the remains of the former one. This was in the claustrum or between claustrum and external capsule. It extended from nearly opposite the front end of the ventricle to about opposite the front end of the recent hemorrhage, and was consequently just beneath the Island of Reil. There was simply an oblong space remaining, with slightly separated walls enclosing a little brownish, thick fluid matter. The said walls consisted of somewhat thickened and discolored tissue without any smooth interior surface. Such is, according to Charcot, the usual form and appearance of old extravasations at this point. This had clearly caused the former left hemiplegia. Motor fibres are not known to traverse this tract. The paralysis must, therefore, have been caused by pressure transmitted from the clot, a view which is corroborated by her recovery.

As to the recent extravasations, the same general description will apply to both. Each was in amount equal, perhaps, to a pigeon's egg. The nerve-tissue was not only much torn, but, from the size of the clot and its longitudinal form, also forced apart. The two were from their appearance of about the same date. It was not possible in either of them to distinguish any older or newer portion. They were very dark, in part semi-fluid, and, so far as color and character of the clot went, at least one or two days old, perhaps several.

The head of each clot was about opposite the front end of the thalamus, and diminished backward to nearly opposite the posterior end of the same. The main portion appeared to be wholly in the lenticular nucleus, while its posterior prolongation or branches may have encroached to a limited extent on other structures.

No further foci were found in any part of the brain. The medulla oblongata, pons, etc., presented no morbid appearance. Sections through these parts were made very close together, so that even a pin-head clot could not have escaped notice. An embolus or thrombus of a week's standing must have produced visible softening, so that they also can be excluded.

The recent apoplectic centres were so large and the tissue about them was so torn as to render them valueless for the localization of any single symptom. The interest of the case, however, lies in the peculiar combination of symptoms. These presented a complex believed to indicate lesion in a part that at the autopsy was found intact. To recall some of them: the paralysis was bilateral, quite symmetrical as regards both extent and severity, and occurred on the two sides simultaneously. There was no loss of consciousness. Immediately there was a greatly increased flow of urine, and which contained both albumen and sugar. There was also well-marked labio-glosso-pharyngeal paralysis. This forms a group of symptoms the cause of which is generally assigned to trouble at the base of the fourth ventricle.[1] Thrombosis or embolism of a terminal bulbar artery is credited with almost identical consequences, and apoplexy from one of the same vessels may not appear very different.

A limited number of cases presenting varying degrees of similarity to the present one have been brought together by Ross in his recent work on "Diseases of the Nervous System."[2] From these he concludes that destruction of the lenticular nuclei in whole or in part *may* produce nearly, if not quite, all the symptoms of lesion of the medulla oblongata. The cases described or abstracted by him, however, ran a slower course, and were less typical of acute bulbar trouble. Ross, in one place, calls this form pseudo-bulbar paralysis—a convenient term for the present. To explain this grouping of symptoms, he points out that the lenticular injury must affect fibres in their course, probably through the internal capsule, from the psychomotor centres in the brain-cortex to the nerve-centres in the medulla. He notes that consciousness may not be lost at the occurrence of this accident, but does not in any of his cases mention disturbance in the urinary secretion. Wernicke mentions the occurrence of bulbar symptoms in cerebral disease. He even cites a case of so-called pseudo-bulbar paralysis, where, however, the pathological condition varied materially from that under consideration. In the present case the two hemorrhages must have occurred at the same time. Although not into a part vitally so important as the medulla, yet from their size and after-effects they proved fatal.

Experimental destruction of one or both these nuclei has not established any facts available in localization. Ferrier, together with many neurologists, simply believes that hemiplegia may result from such injury when unilateral. But these cases, while not disproving, certainly do not confirm this.

As to the possibility of distinguishing between these two (the lenticular and the bulbar) forms, some points may be noticed. In the present case there were no convulsions; no paralysis below the throat; nothing unusual in pulse or respiration; evidently no trouble with the sense of hearing, but increased reflex excitability of the muscles of

[1] In Brain for July, 1884, J. D. Mann describes what he calls a case of pure apoplectic bulbar paralysis. The symptoms very closely resembled those in our own case. He writes: "There is not much difficulty in localizing a lesion such as this. The symptoms at once point to the posterior part of the rhomboid sinus." An autopsy would show whether such complacent confidence in his power of localization were warranted.

[2] Vol. ii., pp. 626–8 of first edition, continued in the second edition. Further two cases of depots in lenticular nuclei—one unilateral—are given by Ross, in Brain for July, 1882.

the jaw. In bulbar lesions the corresponding reflexes are, on the contrary, lowered, while the other symptoms, here absent, occur with more or less frequency.

Such and similar points of discrimination would, however, in view of the very limited number of known cases from which to draw conclusions, hardly warrant confidence in an attempt at differential diagnosis.

HYDROCHLORATE OF COCAINE AS A LOCAL ANÆSTHETIC IN GYNECOLOGY.

By W. M. POLK, M.D.,

NEW YORK.

As a matter of some interest, just at this time, I give the results obtained with hydrochlorate of cocaine in two cases of trachelorrhaphy done this afternoon (October 29, 1884).

Case I. *Double laceration of the cervix uteri, extending on both sides to cervico-vaginal junction.*—The vagina was first washed with a warm water douche, then the cervix, the patulous cervical canal, and the vaginal walls adjoining the cervix were carefully washed with Castile soap, this in turn was washed off, and the surface carefully dried. Next a four per cent. solution was painted over the cervix, in the canal, and over the adjacent vaginal wall with a camel's-hair brush. This was repeated twice, at intervals of two to three minutes, making three applications of the drug. Within three minutes of the last application the operation was begun.

It required the removal of extensive pieces of cicatricial tissue from each angle, making it an elaborate operation of its kind. The time consumed was about forty minutes, the patient made no complaint and suffered no pain till the last ten minutes of the procedure, then she spoke of her discomfort as being a sense of soreness rather than acute pain.

Thinking that the case might be one of those in which the normal sensitiveness of the region was not great, consequently one that might have borne the operation without the use of any anæsthetic, local or general, I chose a second.

Case II.—The woman was one having less self-control than the first, and with a good deal of normal sensitiveness about the uterus and vagina. The preparation of the region and the application of the anæsthetic was the same as in Case I.

No pain was felt till the lapse of about twenty minutes, then it was so acute as to require an application of the solution of cocaine, making in her the fourth. In three minutes the operation was continued and soon completed without further pain. This last application was made directly to the cut surfaces, first freeing them from blood.

The patient, who three years ago had had the same operation performed under ether, was asked which method she preferred, that with ether or this last without; she promptly replied, this last.

In the first case the effect of the drug seemed to be, that it not only blunted sensibility, but it appeared to retard the first appearance of blood upon the cut surface.

These cases I offer as a contribution to the solution of the question now so prominently before the profession—the place to be held by hydrochlorate of cocaine as a local anæsthetic. With a view of testing its value in obstetric practice a series of observations are being made in the Emergency Hospital, the solution being applied to the cervix and upper part of the vagina during the severe pains of the first stage of labor. The result I beg leave to communicate to you when the number of cases are large enough to make the report valuable.

Hypodermoclysis is the name given to the process of injecting saline solutions subcutaneously. It has been employed in Naples in the algid stage of cholera, and with some success.

Progress of Medical Science.

Hernia of the Lung.—Dr. Mariani reports in the *Revista de Medicina y Cirurgia Prácticas* the case of a man, forty-five years of age, of good general health, in whom nothing abnormal was discoverable when he was resting quietly. But when he was exercising actively or coughing, a globular swelling appeared in the right supra-clavicular region, varying in size with each respiratory movement. During an attack of violent coughing it would grow to such a size as to pass entirely across the front part of the neck, attaining a volume equal to that of the head. Upon the cessation of the provoking cause, the neck would return to its normal dimensions. This phenomenon was first noticed when the patient was fourteen years of age. The diagnosis was made by Dr. Bellida of a conical hernia of the lung.

Dilatation of the Stomach in Children.—In an article with this title in the *Archives Générales de Médecine* of August and September, 1884, Dr. J. Comby asserts that the affection is one of by no means rare occurrence in young children, and he cites in proof of his assertion upward of fifty cases seen by him in dispensary practice. Dilatation of the stomach, he says, is constantly associated with rachitis, and this is not a chance occurrence, but the relation between the two conditions is one of cause and effect. The digestive troubles precede and prepare the way for rickets, but are themselves the result of improper alimentation. The physical signs of gastric ectasis are a prominent belly, tympanism, and the succussion sound. The functional troubles accompanying this condition are manifold. There may be dyspepsia, convulsions, insomnia, urticaria, eczema, bronchitis, etc., any one alone or several occurring together. The prognosis is serious, because the dilatation may persist up to the period of adolescence or even into adult life. The sole cause of this affection is the improper feeding of infants; the little patients are brought up on the bottle, given solid food prematurely, or weaned at an early period. But the disease may also occur in infants at the breast, who are nursed too much or too frequently. The prophylaxis consists in nursing at the breast and in restricting the periods of suckling within reasonable limits. Weaning should not be begun too soon, and should be accompanied very gradually. When dilatation exists the diet should be strictly confined to milk for infants and dry food for children of a more advanced age. Sometimes washing out of the stomach is necessary.

Aural Thermometry.—Dr. Flitner (*St. Petersburger Dissertation*) has instituted a series of measurements of the temperature of the meatus auditorius, both in health and in acute and chronic ear affections. The measurements were taken by means of a specially adapted thermometer. The average temperature of the meatus was found to be in health 98.4° F., the averages for the axilla and rectum being at the same time about 99° F. The author's general conclusions are: 1. Daily measurements of the temperature in the course of inflammations of the ear show that the temperature of the latter stands in a constant regular connection with the general temperature of the body. Therefore, in ear affections, the local measurements not only may be substituted for, but even must be preferred to measurements of the temperature in the rectum and axilla. 2. The same may be asserted in regard to ear affections complicated with pneumonia, erysipelas, and other diseases. 3. In cases of ear affections complicated with morbid processes in the cranial cavity, or even on the surface of the skull (caries, phlebitis of the sinuses, erysipelas), the temperature in the meatus sometimes stands higher than in the rectum. Hence the measurements in the ear canal give us a clearer indication as to the course of morbid process in the head than the rectal measurements, and are preferable to the latter beyond any comparison.

THE MEDICAL RECORD:

A Weekly Journal of Medicine and Surgery.

GEORGE F. SHRADY, A.M., M.D., EDITOR.

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CURIOSITIES OF MEDICAL ADVERTISING.

"Nay we see the weakness and credulity of men is such, as they will often prefer a mountebank or witch before a learned physician."
—LORD BACON.

We have been furnished with some instructive facts regarding the extent and character of the quack advertisements which form so picturesque a feature in the daily papers of our country. We refer now only to the personal advertisements of learned gentlemen who announce "advice free," "no cure no pay," "twenty years' Prussian hospital experience," and similar appeals to the business instinct and personal confidence of the community. The American press furnishes a rich field for the study of this kind of literature, a study which is by no means without profit, since advertising columns, after all, reflect the wants of the people. Give us the medical advertisements of a nation and we can get no inconsiderable insight into its character.

One of the first things which strikes the mind in perusing the modest announcements of professional skill set forth in the daily press is the aptness and vigor of the literary style. Here for example is a whole story in three words: "Dr. A. W. X., pile specialist, Indianapolis;" again, "Dr. Tool, removes worms with agreeable remedies, Philadelphia." With more circumlocution a Dr. N. B. announces, "after years of practice" that "married ladies, although apparently healthy and not blessed with offspring, can receive a medicine that is pleasant, safe, and certain to crown their hopes. Let no false modesty prevent your calling." Per contra, another announcement informs the lady readers of the precious press with a suggestive brevity that "our pennyroyal pills are as good as gold."

It is not always in simple language, however, that the specialists of the secular and religious papers present their claims. Assurances of skill and experience, guarantees of success, sympathetic appeals to sufferers from, alas! "Our National Weakness" (which we had always thought was tea) all these are put forth with gorgeous rhetorical embellishments. We might here express the wonder how it is that the East Indian missionary, who "supplies a simple vegetable formula" for cancer, consumption, and erring but noble young men, continues to hold out so long; and why it is that "twenty years' experience in a Prussian hospital" is the necessary qualification for the treatment (by mail) of *amour blessé*.

We desire to do no violence to the feelings of our Western colleagues, but the hard fact exists that the medical advertiser flourishes with an ever-increasing exuberance as we go toward the setting sun. He also develops an originality of expression and fertility of adjective which is hardly known in the South or East.

From Jackson, Michigan, there comes a two column ejaculation of the merits of a local doctor beginning: "Earthquake! Earthquake! Earthquake!" . . . "I will treat on the weekly instalment plan. . . . I can treat the mother, I can treat the father, I can treat the daughter! . . . I will make you a Good Reliable Family Physician!" for twenty-five cents a week.

There is a place in Idaho known as Boise City. Two columns or thereabouts of its local paper are devoted to the advertisements of cock-sure specialists, and private dispensaries, where the erring young and the prematurely old are guaranteed a cure. If it is true that Boise City is but a sample of other Western towns we can only conclude that the amount of "manhood" lost or mislaid in the territories is appalling.

It appears to be the custom of these advertising specialists to make their homes in the great cities and then placard the columns of provincial newspapers with their advertisements. San Francisco, St. Louis, Denver, Chicago, New York, Philadelphia, and Boston are all more or less supplied with these creatures, San Francisco heading the list.

Another custom which is growing rapidly in the West is that of establishing private dispensaries for the cure of all forms of ailment. The Oxygen Cure Company and the Galenic Institute of Minnesota, the Li-po-tai Chinese Sanitarium of San Francisco, the Medical and Surgical Infirmaries in Nebraska, Wisconsin, and Colorado are specimens of this form of enterprise. A somewhat cursory examination among the papers of a dozen Western cities shows that all are supplied with from one to five advertising "private dispensaries." Omaha is blessed with three, and San Francisco with five.

Men and women apply to advertising quacks, first, because they ignorantly believe in their pretensions; second, because they have some disease which they do not wish to disclose to their family physician or a respectable medical man; and lastly, quacks are a final resort of chronic invalidism or fatal disease. The quacks themselves advertise to treat and cure those diseases into whose therapeutics the element of imagination largely enters. "Chronic nervous diseases," sexual disorders, syphilis, all these furnish a fruitful field for presumptuous ignorance to work upon. Among over fifty quack advertisements nearly forty appeal to the classes above mentioned. For the rest, it seems that piles and fistulas, cancer and consumption, varicocele, rheumatism, and gout are paying specialties. In a certain section of the West a Dr. C., "after twenty years' practice in Utah," "will visit Southern settlements, treating club-foot, hare-lip, etc." From which it appears that Utah has advantages for the training of orthopœdic specialists not heretofore generally known.

There is some tendency to make homœopathy a basis of trade. A doctor in Austin, Texas, announces himself as a homœopath, and adds, with a slight degree of orthographical inadequacy, that he makes "difficult and chronic

diseases a specialty." He is less liberal than a certain "specialist of New York City," temporarily residing among the Mormons, whose methods of treatment are stated with an absolute absence of bias, to be "Homœopathic, eclectic, electricity, and magnetism; cures guaranteed by mail," which, we would add, is by far the safest way to guarantee them.

It must not be inferred that the East or South is entirely free from the obnoxious advertisements of the kind we are describing. New York, while it has not many of the typical advertising specialists, is particularly rich in "magnetic healers," "vitalizing rubbers," and doctresses who "take confinements at the house." Throughout New England the practice is gaining of a doctor publishing his card, often with some slight recommendation, such as "graduate of ——," "four years' city experience," etc., appended. By this means good physicians sometimes get in bad company. Thus the card of a Hartford physician comes out sandwiched between that of a clairvoyant and a chronic disease specialist. Certain parts of New England are victimized by itinerant quacks, who enter a town, buy up the local editor, and fleece the hypochondriacs and incurables annually.

We cannot close without referring to an advertisement which recently appeared in the *Philadelphia Ledger*. The capacity shown therein for exact and clear-cut definition of the author's wants and talents is quite unique. A physician, graduate of Jefferson Medical College (Class of ?), "whose religious character is above reproach wants a cash salary . . . in a wealthy sickly family. Warrants to treat successfully dropsy, consumption, cancer," etc. A cash salary in a wealthy sickly family is a great desideratum, and it is unfortunate that society is so arranged that wealthy families as a rule refuse to be sickly; while sickly families as a rule are bound to be poor.

It would be a mistake to infer from the facts and comments given above, that the practice of advertising in the secular press is at all common among the profession in this country. On the contrary, we have been surprised and pleased to find that among the seventy thousand doctors in this country where advertising is a national institution, so few comparatively indulge in it. That the practice is somewhat increasing, however, cannot be denied. And we fear that the license given by a wrong interpretation of good ethical rules, to distribute professional and "practice limited" cards *ad libitum* is doing something to increase this tendency.

THE MEDICAL VALUE OF THE COFFEE ALKALOID AND ITS ALLIES.

There is one element of uncertainty in medical practice which doctors ought to eliminate, and that is the use of impure drugs. No one has done greater service to the profession in this line than Dr. E. R. Squibb, and it has again to thank him for calling in question the utility of certain preparations which have of late years been flooding the market, viz., those of coca and guarana. Dr. Squibb states emphatically that no good, fresh, carefully prepared specimens of coca are obtainable. He also says that the specimens of guarana, which is not a pure article but a South American secret mixture, are also untrustworthy, unequal, and expensive. He has, therefore, decided to abandon the preparation of these articles and to substitute fluid extracts of tea and of green coffee in their place.

It is known that the active principles caffeine, theine, and guaranine are chemically and physiologically identical.

From certain tests Dr. Squibb concludes that, in the power of keeping off drowsiness and producing a sense of restfulness, the following were the equivalents:

Three grains of artificial caffeine = 180 grains of coca, or 45 grains of cocaine; three grains of artificial caffeine = 70 grains of tea, containing 2 grains of theine; three grains of artificial caffeine = 60 grains of guarana, containing 2.6 grains of guaranine; three grains of artificial caffeine = 160 grains of coffee, containing 1.95 grain of caffeine.

According to this the cocaine alkaloid is the strongest, next comes the coffee alkaloid, then that of the tea and of guarana. The differences between the last three, however, are slight and might easily be accounted for, without having to assume any physiological difference in the alkaloids.

The conclusion arrived at by Dr. Squibb is that we can dispense entirely with coca and guarana in medicine, and can use instead officinal preparations of tea and coffee or the alkaloid caffeine. Fluid extracts are preferred, because in this way the dosage can be more accurately adjusted.

Dr. Squibb's views and conclusions merit the attention of the profession, but they are open to criticism in two directions. In offering the tea and coffee extracts as substitutes for coca, guarana, and in a measure, caffeine, he based his inferences as to equivalence mainly upon a series of experiments upon a single symptom, drowsiness, in a single individual. Furthermore, it is to be inferred that cocaine and caffeine are identical alkaloids. This is not the case. The chemical formulæ for the two are different, and physiological experiments, so far as they have been carried, also show some differences in action.

The claim that tea and coffee extracts will do all that coca and guarana will is a plausible one, and it is important that it should be definitely established or refuted. We trust that further careful experiment will be made. Meanwhile we remind our readers of the very truthful words of Rossbach: "The medicinal use of caffeine is very limited."

A NEW BISMUTH-TEST FOR SUGAR.

The Trommer test for sugar is, as all urologists are aware, inexact and difficult in many cases on account of various substances which react with the solution, as creatinine and uric acid, and also because creatinine and other substances retain the cupric oxide in solution. In order to avoid these difficulties it has been attempted to replace the solution by the reduction of subnitrate of bismuth in the presence of an alkaline liquid. To this end Almen has used a solution of 2 grms. of subnitrate of bismuth, 4 grms. of tartrate of potassium and sodium, and 100 grms. of a solution of caustic potash; and with this he has succeeded in detecting 0.1 of sugar in 100 grms. of the liquid.

After a good deal of experimentation on this subject, Nylander, in a recent paper in the *Zeitschrift für phys-*

iologische Chemie, advises a solution containing 2 grms. of subnitrate of bismuth, 4 grms. of the tartrate of potassium and sodium, and 100 grms. of caustic alkaline lessive; the undissolved bismuth salt is separated by filtration, and in order to better determine the effect of the quantity of the caustic alkali, he dissolved in the alkaline liquid 3, 6, 7, 12, and 17 per cent. of supposed anhydrous caustic soda. He found that the solution containing about 8 per cent. of the caustic alkali was much the most delicate, and that it should be used 1 part for 10 of the liquid to be analyzed; also that with this he could easily detect 0.04 per cent. of sugar in the urine. Even with 0.025 per cent. the reaction was not doubtful.

It has been objected to the bismuth solution that it gives a black precipitate, but Nylander shows that this may be avoided by using not more than 8 per cent. of the alkali solution, the precipitate being caused by an excess of it. It does, however, cause a precipitation of phosphates. In examining one hundred specimens of urine fourteen were found, by the bismuth test, to contain sugar. These fourteen were then examined by the Trommer and Worm-Müller methods; these showed sugar in twelve specimens, the result in the other two being doubtful, but the yeast test showed that these also contained sugar. The presence of albumen in a specimen of urine interferes with the reaction of the bismuth solution, but only when it exceeds 0.5 per cent. The presence of sugar is shown by a black or grayish tint. With this test, therefore, as with others, it is necessary first to free the urine from albumen. A great advantage of this solution is that it keeps well.

BRAIN-PRESSURE IN PUBLIC SCHOOLS.

Only a short time ago certain English sanitarians were claiming that the decreased death-rate in Great Britain was largely due to the improvement in the modes of rearing and educating children. Now comes an elaborate report made by Dr. Crichton Brown, in which it is contended that the system of school education in England, is doing great mental and physical damage to the rising generations. He claims that in some London schools nearly one-half (46 per cent.) the children suffer from habitual headache, that 54 per cent. suffer from neuralgia or toothache, 40 per. cent. from insomnia, and that short-sightedness gradually increases from 2½ per cent. in Standard I. to 9 per cent. in Standard VI.

Dr. Brown shows that while in late years the mortality from hydrocephalus under five years of age has been steadily falling, owing to improved sanitary conditions, the mortality between five to twenty years has been steadily increasing. He claims that the cause of this increased mortality is the brain-excitement and fatigue associated with the processes of education. The increase in the number of suicides, especially of those under sixteen years of age, and the increase of insanity are referred to as having some connection with the educational methods.

The main point which is made against the British system of elementary education is, that it attempts to enforce the same amount and kind of instruction upon children who differ in the greatest degree as to mental development and physical strength. The grade system, as carried on, is a kind of Procrustean bed, to which youthful minds must be made to accommodate themselves. Examinations, studying after school and at home, are all sources of immense injury and evil, according to Dr. Brown.

The report, of which the foregoing are the main features, is accompanied with a counter-report by one of the officers of the Government, Mr. Fitch. This latter gentleman vigorously and ably criticises Dr. Brown's facts, conclusions, and methods.

The London medical press naturally supports the medical view of the case, as presented by the distinguished Superintendent of the West Riding Lunatic Asylum.

From this side of the Atlantic it appears as if Dr. Brown had made a very strong plea, but had been rather carried away by the dominance of preconceived convictions. This indeed is not the first time that he has exhibited his capacity for employing tempestuous argumentation and unscientific method. It seems incredible that in the present case he has not made some mistakes. The code exacted by the English school system is lighter than that of France, Germany, Belgium, and, we believe, America. Yet we are told that half of the English school children have continual headaches, insomnia, and neuralgia! Is it brain-pressure that does all this? Then English children must be phenomenally stupid, since there is certainly no such condition in other countries.

The fact is, Dr. Brown has dealt with only half the truth. He should have said more about the homes and food of the school children. Feed them, clothe them, and house them better, and the talk about over-pressure will be very much less.

Not that we deny the existence, to a considerable extent, of the evils depicted. They are known in this country as well as England, and the "Procrustean bed system of teaching" has been condemned for years. But remedies are expensive. The plan suggested of having medical inspectors for the schools is a good one, so far as it goes. It has been tried in France, and in some parts of this country, and has, we believe, worked satisfactorily.

AMERICAN MODE OF USING IODIDE OF POTASSIUM.

For over fifteen years, says Dr. E. C. Seguin, in the *Archives of Medicine*, the practice of giving very large doses of potassium iodide in certain cases has been in use in a small circle of New York physicians. By large doses is meant such as make up a total of two and a half to ten grammes, in twenty-four hours. The cases where these doses are indicated are those of chronic or subacute ulcerative syphilides or of nervous syphilis; in rapidly extending syphilitic ulcer; in extremely acute syphilitic cranial pain; in syphilitic coma or stupor; in certain cases of syphilitic hemispasm, monospasm, or hemiplegia. The mode of administration is to give the saturated solution of potassium iodide largely diluted in plain or feebly alkaline water. It is usually given after meals, and probably, as a rule, acts better in this way. Dr. Seguin advises administering it before meals; and undoubtedly sometimes this method is better. It is one which used to be strongly recommended by older teachers, on theoretical grounds. It is sometimes found, we would add, that the iodide can be best taken in one large dose at night; or, if the potassium salt causes irritability, the iodide of sodium may be substituted.

It should not be forgotten that in a few cases the patients cannot take these large doses, and also that a very prolonged use of them is sure eventually to produce an atonic state of the gastro-intestinal musculature.

Dr. Seguin has quoted a long list of authorities on syphilis, general medicine, and therapeutics, in order to show that the plan of heroic dosage here referred to receives slight or no adequate notice in text-books. It is only in the works of Loomis, Bartholow, and of Van Buren and Keyes, Bumstead and Taylor in this country, and of Buzzard abroad, that any recognition of it is found.

The writer also shows that the method originated with the late Dr. Van Buren, of this city, and became gradually adopted as the result of practical experience by a number of New York physicians. It has been taught by Dr. Wm. H. Draper, by Dr. R. W. Taylor, and also by Dr. Wm. A. Hammond, for many years. It is essentially an American, and more essentially a New York, idea. It is very proper that attention has been called to what is undoubtedly a remarkably efficient therapeutic measure, and that due credit has been given to American medicine for originating it.

News of the Week.

Cocaine Hydrochlorate as a Local Anæsthetic in Gynecology.—Professor Polk, of this city, as will be seen by a communication in the present issue, has used hydrochlorate of cocaine successfully in two operations upon the cervix uteri. The results in these cases look toward an extensive usefulness of the new anæsthetic not only in gynecology but in many of the minor surgical operations.

The Profits of the International Health Exhibition.—The Health Exhibition which was lately closed in London shows a profit of £30,000.

Dr. Joseph White, of Canajoharie, N. Y., died on October 27th, in the eighty-fourth year of his age. He was one of the oldest physicians, and was the oldest Mason in the State.

The International Collective Investigation.—The first inquiry which the Committee propose to institute is in regard to rachitis, its frequency, and the physical condition of the district in which it is found.

The Price of Cocaine Hydrochlorate. — The first preparations of cocaine hydrochlorate used in this city were procured at an expense of 60 cents a grain, or $12 an ounce for a four per cent. solution. It will probably be soon about forty cents a grain. Its price, from present indications, cannot become much less, as only 0.01 to 0.02 per cent. of cocaine can be extracted from the erythroxylon coca, depending on the quality of the leaves. The salt used in Albany at Dr. Merrill's college clinic cost $4.20 per ounce, or 87½ cents a grain. On the other hand, it may not be generally known that Merck, whose laboratory prepared the first used in this city, has an agency in New York, which receives by cable early word of the exportation of special drugs, and that a considerable quantity is now under way to New York. At the principal druggists here the demand has far exceeded the supply. It is to be hoped that the new importation will bring the drug within easy reach of all. It had been used on the continent in throat clinics several months before its introduction into ophthalmic practice by Dr. Koller, which was at the annual Ophthalmological Congress in Heidelberg, September 15th. We learn from a professional friend, living in our vicinity, that he had used it in a case of paræsthesia of the larynx of an exceedingly nervous lady some weeks before the publication of Dr. Noyes' letter in The Medical Record.

Another War over Listerism and Ovariotomy.—A lively discussion is threatened between Mr. Lawson Tait and Mr. Knowsley Thornton upon the question of the value of Listerism in ovariotomy. Mr. Thornton has published a letter (*American Journal of Obstetrics*), in which he tries to show that his own records of Listerian ovariotomies are better than those of either Bantock or Tait, who do not use Listerism. The following tables are interesting:

	Cases.	Died.	Mortality per cent.
Thornton, non-antiseptic hospital ovariotomies	33	5	15.15
Bantock, non-antiseptic hospital ovariotomies	36	8	22.22
Thornton, "Listerian" hospital ovariotomies	129	15	11.62
Bantock, "Listerian" hospital ovariotomies	113	16	14.15
Tait's "strictly Listerian," on his statement	50	3	6
Non-antiseptic	176	24	13.95

It is known that Mr. Tait, when still a rising ovariotomist, was hardly treated with fairness by the London gentlemen whom he now in his triumph too rancorously assails.

The Decline of Antipyresis.—At the meeting of the German Society of Naturalists and Physicians in September last, Professor Ebstein, of Göttingen, read a paper upon the treatment of typhoid fever, based on the treatment of 235 cases in the past seven and a half years. The mortality was 5.5 per cent., or excluding cases where treatment had not been applied, 2.5 per cent. Professor Ebstein denied the value of the abortive calomel treatment. He had used careful dietetic and symptomatic treatment. Baths and antipyretic medicines were only to be used when the high prolonged temperature was evidently causing bad symptoms. The routine use of these measures was not advised. Professor Ebstein's views were supported by most of the speakers in the discussion which followed.

The Recognition of Hard Preliminary Work.—*A propos* of this matter, which we discussed in our editorial columns recently, is a letter from a correspondent of the *College and Clinical Record*, who says: "Men who have worked their way through a good medical school, and passed the ordeal of spiking the masked battery they were compelled to charge at the end of their collegiate course, feel that they have learned something substantial, and that their diplomas are the certificates to this effect made by illustrious men. Every honest worker feels this; and even though he know enough to know how little he knows, yet he feels that his diploma is worth more than that of a man who graduated at the 'College of Physicians and Surgeons of Brown's Cross Roads, Western Arizona.' It is true, a good diploma does not

make a good doctor, but it immensely increases the chances in this direction, and diplomas do have a varying commercial value!" A self-protection, the writer adds, will drive all graduates of first-class colleges to the plan of indicating their alma mater after the letters M.D.

The correspondent from whom we quote is right, so far as he goes. As is natural with young graduates, he attaches a rather exclusive importance to the value of his alma mater, and forgets that other things than two or three years at a medical college are required to make a doctor. The degree of A.B. or A.M., the year or more in a hospital, the post-graduate study abroad or at home, may, any one of them, more than compensate for didactic disadvantages.

The Use of Cocaine Hydrochlorate by Dr. E. S. Peck, of New York.—Dr. Peck writes: "Of the three uses of the drug—one physiological, two clinical—at my hands, only one deserves special mention at this time, while all corroborate its anæsthetic properties. A laborer received a clean wound of the lower lid, cutting through the conjunctiva, tarsal margin, and integument. A stitch in the conjunctiva and two in the integument of the lid were taken after six instillations of a four per cent. solution, covering twenty-five minutes. Patient experienced no pain either from the forceps or needles, and stated that the sensation was as if something had been pressed against the parts involved."

The Shady Side of Medical Education Abroad.—The New York *Medical Journal* discusses in a forcible and suggestive manner certain of the dangers to which students who go abroad to study for medical instruction are subjected. "We have no hesitation in asserting," says the *Journal*, "that many a medical student who would have made a steady and honorable member of his profession, had he entered upon his duties at once on leaving college or hospital, has been spoiled by his residence abroad, where he has broadened his professional knowledge but suffered an irreparable loss of moral tone, in delicacy of feeling, and in tenderness toward suffering. This is no cant—it is simply an every-day experience. It is unnecessary to urge the trite remark that an educated physician is something more than an encyclopædia of facts or an infallible diagnostician, that he is or should be an honorable gentleman, and that, too, not for utilitarian reasons, but because it is *in him*. . . . The 'free and easy' moral atmosphere of the great continental capitals, notably Vienna, the light regard in which woman is held, the perfect subjection in which patients are kept, and the cold-blooded way in which those patients are treated—all of these are dangerous elements in foreign medical education. . . . Again, methods of examination and treating patients are learned which it would be positive professional suicide for a man to practise at home." There is more in this same line given by our esteemed contemporary, who does not at all deny at the same time that great benefit may be obtained by foreign study. We commend the remarks to those of our readers who contemplate studying abroad or sending their sons there. It is true that the profession has now more need of honorable gentlemen than of "soulless scientists" in its ranks.

The Paris Academie de Medécine has talked cholera all summer and has got no further on the matter than when it started. Upon great occasions this learned body seems always to turn itself into a Cave of the Winds.

Dr. Mills succeeds Dr. Osler as Professor of Physiology in the McGill Medical College, Montreal.

Poisoning from Mother Winslow's Soothing Syrup.—Dr. A. B. Hirsh reported to the Philadelphia County Medical Society the case of a boy, aged twenty months, who was poisoned by "Mother Winslow's Soothing Syrup." He was given four doses of less than half a teaspoonful in fourteen hours. Vigorous anti-narcotic treatment alone saved the child. Many physicians, we believe, are familiar with similar cases.

American Academy of Medicine.—At the annual meeting of the American Academy of Medicine, held this week in Baltimore, the following officers were elected: *President*—Albert L. Gihon, United States Navy; *Vice-Presidents*—R. Stansbury Sutton, of Pittsburg, Pa.; James A. Steward, of Baltimore, Md.; William Elmer, of Bridgeton, N. J., and James Cheston Morris, of Philadelphia, Pa.; *Secretary and Treasurer*—Richard J. Dunglison, of Philadelphia, Pa., and Charles McIntyre, Jr, of Easton, Pa., *Assistant*.

Dr. Oliver Wendell Holmes, of Boston, and Major George M. Sternberg, M.D., of the U. S. Army, were elected honorary members. The following resolution was unanimously adopted:

"That the American Academy of Medicine recognizes in the recent munificent gift of William H. Vanderbilt to the College of Physicians and Surgeons of New York, a most important and valuable service to the science of medicine in America; that in this spirit the Academy tenders to Mr. Vanderbilt its obligations, with the assurance that in no better way could the higher education of our profession and the benefit of humanity be promoted."

Reviews and Notices.

The Alpine Winter Cure. With Notes on Davos Platz, Wiesen, St. Moritz, and the Maloja. By A. T. Tucker Wise, M.D., L.R.C.P., M.R.C.S. London: Baillière, Tindall & Cox. 1884.

Dr. Wise has made a special study of certain mountain health-stations, and, writing without bias or exaggeration of any kind, what he says may be accepted as true without hesitancy. The remarkable curative and health-giving properties of the Alpine climate are abundantly shown in this unpretentious little volume.

Practical Manual of Obstetrics. By E. Verrier, M.D., Lecturer on Obstetrics in the Faculty of Medicine of Paris. Fourth Edition, with the Four Obstetric Tables of Professor Pajot; One Hundred and Five Illustrations. First American Edition, with Revision and Annotations by Edward L. Partridge, M.D., Professor of Obstetrics in the New York Post-Graduate Medical School. Wood's Library of Medical Authors. New York: W. Wood & Co. 1884.

This is a brief *résumé* of practical obstetrics, more particularly from the French point of view. It has been in a measure Americanized by the incorporation of more or less important notes supplied by Dr. Partridge. In its new shape it will be found serviceable by students and those practitioners who lack time for the study of certain details, which are necessarily found in the more pretentious and elaborate treatises.

STUDENTS' MANUAL OF ELECTRO-THERAPEUTICS. By R. W. AMIDON, A.M., M.D. New York: G. P. Putnam's Sons. 1884.

THIS modest little volume can in no way replace, nor does it pretend to, the more elaborate treatises on medical electricity already extant. But as an introduction to practical electro-therapeutics this book has its *raison d'être*. Its chief merit consists in the fact that it is quite concise, and, as far as it goes, thoroughly scientific. Static electricity is not dignified by so much as a mere mention by the author.

MALARIA AND MALARIAL DISEASES. By GEORGE M. STERNBERG, M.D., F.R.M.S., Major and Surgeon U. S. Army, etc. Wood's Library of Medical Authors. New York: W. Wood & Co. 1884.

THE author has wisely prepared a work which will be very welcome to the general practitioner, as giving, not the dogmatic views of a single person, but the combined experience of observers in various countries, including, of course, our own. It is obvious to all candid minds that there are many puzzling problems connected with the subject of malaria. Dr. Sternberg does not pretend to have solved them. On the other hand, we certainly know considerably more about malarial diseases to-day than we did ten or even five years ago. The author's treatise is in the main an able and candid review of the actual state of our knowledge, considered in the light of the most recent researches published at home and abroad, supplemented by the additional information derived from the author's personal studies.

MANUAL OF PHYSIOLOGY. By GERALD F. YEO, M.D., F.R.C.S., Professor of Physiology in Kings College, London, etc. Philadelphia: P. Blakiston. 1884.

THIS is an elementary treatise designed for the use of students. It is clearly written, and, while not too bulky a volume, it yet contains all the facts necessary to a comprehension of the principles of physiology. The style is much simpler than that of Foster's well-known treatise, and there is far less display of abstruse science. Yeo's physiology does not commend itself to advanced students, but the beginner will find in it all that he needs for the acquisition of clear ideas concerning the first principles of a rather complicated science.

THE HUMAN ELEMENT IN SEX. Being a Medical Inquiry into the Relation of Sexual Physiology to Christian Morality. By DR. ELIZABETH BLACKWELL. Second Edition. London: J. & A. Churchill. 1884.

THIS little work, though a trifle diffuse in style, and perhaps a little narrow in some of its positions, is on the whole a sound, sensible, and useful contribution to the subject of physiology and morals.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Annual Meeting, October 27, 1884.

S. OAKLEY VANDER POEL, M.D., LL.D., PRESIDENT, IN THE CHAIR.

THE REPORT OF THE BOARD OF CENSORS,

together with the report of the counsel of the Society, E. C. Ripley, Esq., was read by Dr. J. W. Howe, Secretary, and showed that during the last year the work of prosecuting illegal practitioners had been carried on vigorously and successfully. The Eclectic Medical College of the City of New York had been proceeded against for illegal transactions with reference to granting diplomas, and the prospect was clear for convicting the authorities of the institution of having issued bogus diplomas, and therefore the annulling of the charter of the college.

THE REPORT OF THE COMMITTEE ON ETHICS showed that charges made by one member against another had occurred in only one instance, and in this the plaintiff had declined to press them.

The committee spoke against the indulgence to which physicians, to a considerable extent, favored themselves with, by recommending copyrighted medicines, mineral waters, etc.

THE REPORT OF THE COMMITTEE ON HYGIENE was read by Dr. R. Van Santvoord, Secretary, and consisted of two parts: First,

VENTILATION OF THE SEWERS,

by DR. E. H. JANES. "Among the reports presented by the Committee on Hygiene at the last annual meeting was one reflecting somewhat severely on the method of ventilating public sewers in this city. This subject, regarded by your committee as an important one, has received considerable attention, and while the method of ventilation now in use may be open to criticism, and in some localities decidedly objectionable, the present committee is not yet prepared to fully sustain the report of its predecessor, nor to suggest any other plan that would be equally practicable and as readily controlled by the public authorities.

"The principal object of sewer ventilation is to protect the atmosphere of our dwellings from what is commonly called 'sewer gas,' or, what it is more properly, sewer air, with which is mingled more or less of the products of organic decomposition. Its necessity arises from various causes to which sewers are exposed. Variations in temperature, the amount of sewage, efficiency of flushing, rate of flow, and condition of the outlet, all influence the development of deleterious gases, as they retard or hasten the process of decomposition, and thus bear an important relation to the necessity for ventilation. A sewer with a uniform water supply and a steady, uninterrupted flow will require less means for ventilation than one which is tide-locked twice every twenty-four hours, and thus subjected to periodical contraction and expansion of its air capacity. When a sewer becomes tide-locked, not only is the discharge for the time being arrested, but the contents accumulate by reason of fresh contributions of sewage and tidal influx; and if this occurs during a heavy rain the case is aggravated, the accumulations of sewage, tide, and storm-water increase, and the air in the sewer is forced back, being more and more compressed, perhaps to half its original volume. In this condition we have within the sewer the presence of an additional atmosphere which no house-trap can withstand. The method of relieving this pressure adopted in our city, in the city of London, and indeed in all the cities of England, is to perforate the manhole-covers that the imprisoned air may escape along the middle of the roadway, and thus mingling with the atmosphere, the gaseous products of decomposition are readily diffused, the organic particles oxidized and rendered harmless. As the tide recedes the sewer is relieved of its engorgement, the manhole shafts become inlets for fresh air, and thus the air in the sewer is renewed as the accumulated sewage is washed by the receding tide.

"During the period of low water, and also in sewers that do not become tide-locked, the manhole shafts act alternately as upcast and downcast shafts, according to variations of temperature which occur at every discharge of hot water from the house-drain, causing an upward current at one manhole and a downward one at the next. In proportion as the air in the sewer is thus kept in motion, and the flow of sewage is uninterrupted, will decomposition be retarded or prevented, a result secured only by constant motion as opposed to stagnation. It does not appear that the air from such a sewer discharged through the manhole-covers along the roadway of a street lying in the direction of the prevailing winds, can be to any extent injurious to occupants of houses on such a street. With stagnant sewers along narrow, crooked

streets lined on either side with high buildings, the case is different, and often aggravated by the discharge of waste steam into the sewer, a practice which cannot be too severely condemned.

"It appears to your committee that while the dangers arising from ventilating sewers into the roadway have probably been somewhat exaggerated, still a better method would be desirable, could one equally practicable be devised and adopted. It has been suggested that sewer ventilation would be best and most safely effected by carrying a four- or six-inch pipe from each house-drain at a point between the trap and the sewer up the wall of the house so as to terminate above the roof. Were houses along a street of a uniform height, and the material and joints of the ventilating pipe impermeable to sewer air, such a method would be an improvement on the one now in use, but its adoption would involve the interference of the authorities with the rights of private property owners, which our citizens are not yet ready to grant. A far more effective method would be to ventilate through the house-drains and soil-pipes, the warmth of which would maintain a constant upward current, while the perforated manhole-covers would serve as inlets for fresh air. But as this method would require absolute perfection in our plumbing arrangements, a condition which does not obtain in our city, your committee cannot think of recommending it."

The second part was prepared by Dr. Richard H. Derby, and consisted of

NOTES ON CONTAGIOUS OPHTHALMIA IN SOME OF THE ASYLUMS OF NEW YORK CITY.

After giving an outline of the clinical features of this disease, making special reference to its contagious character, the writer directed attention to the existence of the malady among the children cared for in the larger asylums of this city.

In the asylum for boys he found that about twenty-nine per cent. had contagious ophthalmia; in the asylum for girls, nineteen per cent. In nearly all these cases the disease was in the first stage. On inspecting the dormitories and wash-rooms it was found that each child had its own bed, separate towel, and that water for washing was supplied from small jets, at intervals of one foot, along a horizontal pipe above the sink; no basins were used. In the boys' asylum the bath-tub was sufficiently large to allow eight to bathe at the same time.

In another of the largest institutions, 28.5 per cent. of the seniors; thirty-six per cent. of the juvenile department in the boys' division had contagious ophthalmia; in the girls' division thirty per cent. of the seniors were afflicted with the same affection. Total number of children, 1,586.

After giving similar statistics from another institution, Dr. Derby continued that the communicability of the affection was strikingly illustrated by the fact that when a group of children presented themselves in succession, they were those who habitually occupied adjacent seats in the class-room.

The purpose of these investigations will have been effected if the writer succeeded in drawing attention to the fact that in the asylums of this city a disease fraught with danger to the eyes of all assembled there exists to an alarming extent.

The whole number of children examined was 3,025, whose eyes were believed in the main to be healthy, and 25.12 per cent., or one out of every four, had communicable eye disease. To meet an evil so great, should not a commission be appointed by our State Board of Health, for the purpose of making a thorough investigation of the condition of the eyes of all inmates of our asylums and reformatory schools? Should we not see, *first*, that it be an absolute rule in these institutions that no child be received until his or her eyes have been examined by competent men? *Second*, that from time to time the eyes of all inmates of these institutions should be examined, and if cases of contagious ophthalmia are found they should be isolated and receive proper treatment?

For assistance in making these investigations he was indebted to Dr. W. S. Dennett, of this city.

On motion by Dr. C. R. Agnew, the present Committee on Hygiene was continued as a special committee to report further on the subject of Dr. Derby's contribution.

OFFICERS FOR THE ENSUING YEAR.

President, Dr. Daniel Lewis; *Vice-President*, Dr. Laurence Johnson; *Secretary*, Dr. Wesley M. Carpenter; *Assistant Secretary*, Dr. Charles H. Avery; *Treasurer*, Dr. Orlando B. Douglas; *Censors*, Drs. Joseph W. Howe, Frederick R. S. Drake, Francis M. Weld, Henry T. Peirce, William Oliver Moore.

THE COMMITTEE ON PRIZE ESSAYS.

Dr. C. C. Lee, Chairman, reported that only one es say had been submitted, and that in the unanimous opinion of the committee it was not sufficiently meritorious to be entitled to the prize.

THE OFFICE OF CORONER.

Dr. R. Tauszky offered a resolution asking the Society to indorse the nomination of Dr. Messemer for Coroner. It was laid upon the table.

PROPOSED AMENDMENT TO THE BY-LAWS.

Dr. A. Jacobi offered the following amendment to the by-laws. That the *Comitia Minora* be directed to recommend no applicant for admission to membership unless he be a graduate from a medical college in good standing, or a licentiate of a regular—unsectarian—State or County Medical Society of this or any other State; or if his certificate be of sectarian character, unless the applicant declare in writing his or her abnegation of sectarian principles and practice. Laid over under the rule until the next annual meeting.

An amendment to the by-laws was adopted providing that the stated meeting heretofore held in the month of June be omitted.

On motion by Dr. Piffard, the subject of

ARREARS IN DUES

was referred to the *Comitia Minora*, to be reported upon at the next meeting of the Society with reference to the best method of dealing with delinquents.

APPLICANTS FOR MEMBERSHIP GRADUATES OF HOMŒOPATHIC MEDICAL COLLEGES.

The *Comitia Minora*, to which the applications of two candidates for admission to membership have been referred back, because they were graduates of homœopathic medical colleges, reported again, and recommended that certificates of membership be granted to these applicants.

The Secretary read letters from the candidates, in which each stated that he had resigned from all homœopathic medical societies, did not and would not practise medicine with sectarian designation, were in no way connected with homœopathic medical journals, and were willing to be governed professionally by the by-laws and regulations of the Medical Society of the County of New York.

Dr. E. Eliot, by proxy, offered the following motion: That a diploma from a homœopathic medical college alone must not be considered as a claim for admission to membership in this Society.

The motion was laid upon the table, and the recommendation of the *Comitia* was adopted.

The President announced the deaths of Dr. John G. Adams, Dr. Joel Foster, Dr. David F. Fetter, and Dr. Allen S. Church.

The Society then adjourned to meet on the fourth Monday in November.

THE NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, October 7, 1884.

W. J. MORTON, M.D., PRESIDENT, IN THE CHAIR.

ON THE NERVOUS ORIGIN OF SOME DISORDERS OF THE ALIMENTARY CANAL.

DR. L. WEBER read a paper on the above subject (see p. 481).

DR. E. C. SEGUIN, in opening the discussion, said that the disorders alluded to in the paper just read were far from uncommon. It must often prove quite difficult, however, to reach a positive diagnosis. The abdominal symptoms were by no means so characteristic and well-defined that a clear case could readily be made out. It was to be remembered that dyspepsia, pure and simple, was frequently accompanied by a variety of morbid nervous manifestations. In this country especially, where we had both many dyspeptics and numerous neurotics, a differential diagnosis would not always be possible. In this connection he also alluded to the fact that the ordinary American diet and cookery predisposed to gastro-intestinal fermentation. He thought that repeated physical examinations at different periods, even of the same day, might aid in putting a diagnosis on a firmer basis. It was important in all cases to separate subjective sensations from true objective symptoms. The discovery of the tender pressure-points was new to him. He failed to see how hyperæsthesia of the deep-seated abdominal nerve-plexuses could be discovered through palpation. As regarded treatment, he was of opinion that it should be in the first place tentative. From his own experience he was inclined to place more value upon a general tonic *régime* than upon direct and local medication.

DR. LESZYNSKY inquired whether Dr. Weber's patients were also sufferers from migraine, and on being answered in the affirmative as regarded two women, he said that Clifford Allbutt, in the recently delivered Gulstonian Lectures, had laid stress on the frequent association of these evils.

DR. DANA stated that he had failed to find evidence of hyperæsthesia of abdominal ganglia, especially of the gastric plexus, in cases of this kind. In his patients, who were generally quite thin, Dr. Seguin's objections touching the possibility of deciding as to the presence of this symptom by palpation, had not been found to hold good. He had been able to explore the abdomen in its deeper parts very thoroughly in his cases. He pointed out that fermentative dyspepsia might accompany, as an independent affection, various neurotic disturbances, and cited a case forcibly illustrating such a condition. In the treatment of neurotics suffering with pronounced gastric disturbances he had found mountain air beneficial.

DR. PUTNAM-JACOBI thought that one important diagnostic point had been overlooked, namely, the relation of the onset of the paroxysm of pain to the time of eating. In purely nervous dyspepsia, say of reflex ovarian or uterine origin, the symptoms of gastric distress were at their maximum during the hours of fasting, and relief might be procured by the ingestion of food. In fermentative dyspepsia, on the other hand, the introduction of food into the stomach would only aggravate existing symptoms. Moreover, pain occurred from one-half to two hours after a meal. Besides this, the acid eructations, the coated tongue, the bad taste in the mouth at morning, should make differential diagnosis comparatively easy. In nervous dyspepsia the tongue was remarkably clean. During, or even before a paroxysm of pain, nausea was not observed.

Two marked cases of neurotic dyspepsia had fallen under her observation some time ago. The first concerned a lady, sixty years of age, who soon after having come under the influence of London's foggy weather, developed two neuroses. The first was spiritualism, and the second violent paroxysmal gastralgia. Six eminent London physicians decided that she was afflicted with cancer. But Italian sunshine quickly cured her. The second case was that of a man who, after the loss of a loved child, became much depressed in spirits, and was afflicted with gastralgic attacks. For months he grew progressively worse, losing flesh all the time. He was eventually completely cured by arsenic. Another case had been cured by the faradic current. She thought that it was more difficult to distinguish moderate degrees of glandular atrophy of the stomach from neurotic disorders than to separate the latter from fermentative dyspepsia.

DR. H. D. CHAPIN believed that the nervous manifestations were often secondary to acid fermentative processes, set up by the excessive consumption of starchy foods.

DR. E. C. WENDT remarked that it was quite evident from the drift of the present discussion, as well as from similar debates in foreign societies, that the entire subject was still involved in considerable obscurity. One thing was certain, however, namely, that the profession in all civilized countries was beginning to reinstate the nervous system, in its relation to disease-development, into a formerly occupied position of pre-eminence. Not many years ago the pathological school had been so exclusively dominant that functional disorders had been almost relegated to the limbo of the mythical. Within the past few years, however, a great change had set in, and at present there seemed to be, if anything, a danger of falling into the other extreme. Certain it was that to-day there either was much less gastro-intestinal catarrh, or else it was more frequently overlooked than formerly; while on the other hand nervous dyspepsia must either be of much more frequent occurrence, or else be erroneously assumed to exist in true structural disease of the alimentary canal. Clifford Allbutt had, in the recently delivered Gulstonian Lectures, drawn some vivid pictures of this class of cases, and the whole subject had been but lately discussed at the third German Congress of Internal Medicine. At that meeting Leube had reiterated his former well-known views on nervous dyspepsia. But he had been opposed by several competent observers, prominent among whom was Ewald. The latter took the ground that real disease of the stomach might start the entire train of nervous symptoms so often seen in neurotics. Trousseau's *vertige stomacale*, dyspeptic migraine, and Rosenbach's cases of vagus neurosis were some of the rarer manifestations belonging to this category. Ewald further asserted that Leube's well-known *Verdauungs-versuch* had no great practical value, for he had in many instances found food-particles in the water used for washing out the stomach seven hours after a simple meal. So also he had found the gastric fluid in positive structural disease, such as cancer and chronic catarrh, to give normal chemical reactions. Dr. Wendt thought it was quite evident from all this that we still lacked decidedly characteristic or pathognomonic symptoms of this class of disorders. It should never be forgotten that dyspepsia was not a disease in itself, but might be a symptom of very many vastly dissimilar affections. To the presence or absence of painful pressure-points, supposed by Burckart to be characteristic of nervous dyspepsia, he had not, from his own experience, learned to attach any significance. He also thought that the term gastric neurasthenia, suggested by Burckart, was not a happy selection. Such cases should be classified rather under the general heading of "nervous disorders of the alimentary canal." One point he wished, however, to emphasize, namely, that nervous dyspepsia did not kill. He had seen such patients apparently brought to the very door of death, but in the end they had invariably recovered. One case he remembered in particular, that was almost the exact counterpart of the first case mentioned by Dr. Jacobi. Here too, eminent physicians had been misled, probably by the cachectic appearance of the patient, to diagnosticate gastric cancer. But the lady in question fully recovered, and at present, six years after she had been given

up, she was better, stronger, and weighed more than at any other period of her life that she could recollect. Finally, as regarded treatment, he thought that general and hygienic measures were more calculated to benefit sufferers of this class than drugs. Absolute rest was at times imperative. Of drugs he thought arsenic was the best for the intervals, and morphine subcutaneously or in suppositories for paroxysmal pain.

Dr. Morton alluded to the ready supervention of diarrhœa through emotional disturbances in neurasthenics. Animals under excitement often showed similar symptoms, but he did not wish to infer for this reason that they too were afflicted with neuroses.

Dr. Teed, of Kansas City, raised the query whether we were not painting old facts in new colors. He believed that all the troubles mentioned in the paper and the discussion could be included under the old designation of atonic dyspepsia. His explanation of the origin of these disturbances was as follows: Nervous influence that should be sent to the stomach became diverted into other channels, and as a consequence the gastric glands failed to perform their function. Besides this, nerve stimulation might happen in the stomach, be thence transmitted to the central nerve-organs, and once more reflected back upon the stomach. Ingestion might in this way lead to watery secretion and thus result in copious evacuations. But the neurotic taint might manifest its existence through other organs besides the stomach. Cardiac palpitation might occur. The latter might even co-exist with gastric distress and yet the consummation of digestion be neither retarded nor in any other way disturbed.

The great point to know was, where did all the nerve-force come from? How did it originate in the body? In his opinion it ultimately depended entirely upon oxidation or some similar chemical change constantly taking place in organized beings. He thought that the various cells of the body might be likened to minute electric batteries that were perpetually active. Through their agency force was liberated which primarily assumed the form of heat. In this way currents were normally sent to the brain and again started out from the encephalon to other parts.

Of course, if the paths of conduction became altered failure of force-transmission must result. This gave rise to morbid symptoms which we must endeavor to interpret. He also compared the relations of the cerebro-spinal with the sympathetic nervous system to the two wires of a battery. One thing was certain, namely, that new matter or new force had no existence in the human body. The same physical laws that governed the outer world also held good for our bodies. It was essential, therefore, to know well the rules and laws of the transmission and radiation of force in the outer world before we could hope to understand the actual condition of nerve-action within us.

Dr. Weber, in closing the discussion, said that he agreed with Dr. Seguin in the importance which he attached to a thorough examination of cases of dyspepsia of whatever nature, particularly as to the presence of dilatation, but believed that dilatation was not only liable to occur when patients indulged in too liberal quantities of farinaceous food and sweets, but also by the vicious habit which many people, young and old, had of putting much more food into their stomachs at a given meal than the organ ought to receive at one time. Like Dr. Dana, he had not been able thus far to verify Dr. Burckart's experiences as to the tenderness of one or more of the abdominal sympathetic ganglia in certain cases of gastric neurasthenia.

The good results which Dr. Putnam-Jacobi and others had seen from small doses of arsenic in the management of these disorders he was ready to accept as an illustration of rational therapeutics. He had himself seen excellent results from drop-doses of Fowler's solution, taken on an empty stomach, in the early morning retching and vomiting of habitual topers. He believed that Dr. Wendt was right when he said that Dr. Burckart's designation of "neurasthenia gastrica" was not happily chosen, and that the general name of "nervous disorders" would be better.

PSEUDO-BULBAR PARALYSIS.

Dr. William Browning, of Brooklyn, read a paper illustrating the above condition (see p. 487).

Dr. E. C. Seguin related a case of bulbar disease which, if not quite germane to the present subject, was intrinsically so interesting as to merit the notice of the Society.

Male, forty-four years of age, seen January 31, 1876, in consultation with Dr. M. J. Moses. Denies syphilis or recent sore throat. Well up to January 1st, when he had epileptiform attacks limited to the limbs of the left side; in one attack the tongue was bitten. No recurrence of attacks. Subsequently severe right supraorbital neuralgia cured by arsenic. On January 29th sudden inability to swallow solids developed in four or five hours. Examination shows a spasm (?) two inches below pharynx. The voice is nasal and articulation is imperfect. Patient is conscious of the labor of speaking.

In view of the rapid development of the symptoms, I expressed the opinion that the case was not one of true bulbar paralysis of the progressive form, but an acute paralysis due perhaps to an ignored diphtheria, and that the prognosis was not quite hopeless.

On February 7th, nine days after the appearance of dysphagia, Dr. Moses sent the patient back to me with the following letter:

"My Dear Doctor: I asked Mr. S—— to call upon you and deliver this note, which for obvious reasons I send sealed. I am afraid he shows more progressive symptoms than when you last saw him, and that the prognosis made now would not be quite as favorable. I think it will be necessary to put you in possession of all that has happened since last Monday when you first saw him.

"On Monday evening he lost the power of swallowing fluids, and I passed a stomach-tube, but it produced such irritation that he almost suffocated from spasm of the glottis when the tube was in his stomach. I passed the tube several times, but each time was forced to withdraw it to avoid a catastrophe. I finally hit upon an idea which I congratulate myself and the patient upon. Having learned from previous examination that the middle and lower muscles of constriction were not as much involved, I made my patient lie down and permit the mouthful of fluid to flow down below the edge of the velum, and *then* to swallow. This effort raised the larynx and propelled the fluid within the grasp of the lower constrictors. By this device (lying down at each mouthful, with the head thrown far back) Mr. S—— was able to take sufficient nourishment, milk, eggs, and beef-tea, and his medicine, viz., quinine, iron, and strychnia in solution, during yesterday and Wednesday.

"On Tuesday, by violent effort, he was enabled to swallow sitting up, but at the same time I noticed marked loss of power in the muscles of the cheeks and lips, and an aggravation of his nasal speech. I noticed also, steadily progressing, an irritation of the pneumogastrics, evinced by violent, prolonged, and characteristic cough. The irritation is almost constant, touching the throat with an electrode or the effort of swallowing bringing on a most violent paroxysm. I have faradized the muscles of the pharynx with a gently increased current, and galvanized the spinal accessory and glosso-pharyngeal with from four to six cells of Kidder's eighteen-cell battery. At first each was well borne, but yesterday a very mild current from either battery provoked vomiting, and on passing a current from six cells over the pneumogastric, I provoked a prolonged and almost exhaustive cough. I am afraid the disease is progressive and due to central lesion. I send him to you for another examina-

tion, that you may compare his present condition with the result of your examination last Monday, and see if some new points may not have arisen to point to you a separation of the two theories then presenting, viz.: labio-glosso-pharyngeal, or diphtheritic paralysis. . . ."

Examination: speech not as good; whistling is possible but feeble; can't fill cheeks with air; much salivation; orbiculus oris weaker, but can still make O. The tongue moves well in all directions. Voice not as loud as at last note. Much cough (more morning and night). Throat very irritable. No facial palsy (apart from orbic and buccinator paresis). Voice very nasal and articulation is impaired. In speech and by reflex action soft palate acts well. Fails to swallow a morsel of bread, and the laryngoscopic mirror shows it lying behind the glottis a little to the left. Rima glottidis red; vocal cords not seen; no anæsthesia of face or hands; no hemiplegia.

It should be added that two years ago patient had neuralgia of the left side of the face and paralysis of the left vocal cord. Again denies syphilis. I adhered to my diagnosis of acute non-progressive bulbar paralysis, and advised continuing the iron and strychnia and using weak galvanism to back of neck and outside of throat. My notes are not complete, but I can state that the patient recovered somewhat slowly but completely in a few weeks.

Dr. Morton alluded to two cases of hysterical simulation of bulbar disease that had been on the point of being reported as instances of progressive bulbar paralysis, when both recovered completely.

Dr. Seguin said that the converse mistake had once happened to him. It was a case which, owing to the absence, at the first visit, of labial symptoms and the predominance of palatal disturbance, was held to be not a genuine instance of progressive bulbar disease. At the second visit, however, difficulty of swallowing and other signs left no doubt as to the true nature of the affection.

NORTHWESTERN MEDICAL AND SURGICAL SOCIETY OF NEW YORK.

Stated Meeting, April 18, 1884.

E. C. Harwood, M.D., President, in the Chair.

Dr. Edward S. Peck read a paper (see p. 482) on

MINERAL ASTRINGENTS AND CAUSTICS IN OPHTHALMIC PRACTICE.

Dr. Baruch objected to the use of the word *caustic* as implied in the paper, as it was not its usual signification. Caustics and astringents present this great difference, that the former are destructive, and the latter produce their effect without destruction of tissue. In the groups of conjunctivitis alluded to, silver-nitrate should be regarded as an astringent. Silver-nitrate is not a caustic in liquid form; it is not destructive except by violent application. It acts rather as a modifier of the action of disease.

Dr. Page uses tepid water in painful forms of conjunctival inflammation; has been led to believe cold water injurious, and has never used silver-nitrate. He cited a case of recurrent phlyctenular conjunctivitis, which was brought on by overwork at school, and was successfully treated by general treatment with calomel applied locally to the eyes.

Dr. Knapp agreed with the paper in its differentiation as to the selection of caustics, especially the sulphate of copper stick in chronic granular conjunctivitis; but the longer he practises in such diseases the more restricted is his use of caustics. So long as a conjunctivitis is acute, he abstains from powerful remedies; he uses cold compresses day and night. When the disease is in danger of becoming chronic, then he uses caustics and astringents. In the ophthalmia of scrofulous individuals, he has ordered the head to be dipped in pails of cold water, and with very good results. The peculiar form of vernal conjunctivitis brought out in the paper he believed to be endemic in character; no treatment seemed to be of avail. He prefers mild alkaline washes; astringents seem to do no good.

Dr. Bosworth used silver-nitrate only on the mucous patch in throat cases. He has abandoned all solutions of the salt in treatment of throat diseases. Cold water is always an irritant to columnar epithelium.

Dr. Wood thought the hygienic surroundings of patients suffering from granular conjunctivitis were frequently at fault; upon the correction of these depended the success of treatment of such cases. In the ophthalmia of the newly-born, whether simple or gonorrhœal, mild treatment met all requirements. Constant washing out with hot water, and dropping mild alum water into the eye three or four times a day, constituted his treatment in such cases.

Dr. McLaury had used hot water with best effect in similar cases of purulent ophthalmia of infants.

Dr. Jacobus believed the pain which was felt on the application of cold water to a mucous membrane was caused by a swelling and rupture of the epithelium. If salt in the proportion of about one drachm to one pint of water be used, it becomes similar to the physical fluids. In gonorrhœal ophthalmia he uses hot water for cleansing and vaseline to keep the lids apart.

Dr. Agnew premised his remarks by saying that thirty years ago caustics and antiphlogistics were much used in ocular affections. Now he does not use silver-nitrate in any form, either in private or public practice, and copper but a very few times in the course of a year. He relies upon general treatment more and more each year. He believed topical applications had been carried to excess. The cold douche was just the tonic needed in some chronic forms of conjunctival disease. Keeping the parts clean was an important point always to be had in mind. Hot water was now used where formerly cold had been employed. He believed that the highest attention should be paid to tissue-building.

Dr. Jarvis thought the amount of silver-nitrate employed should determine whether its effect was or was not caustic. It acts mechanically by producing an albuminate, thus securing protection to the subjacent parts; this action is chemically astringent. When frequently employed it produces destruction of tissue, and should be regarded as caustic.

Dr. Fruitnight corroborated the statement made by the author of the paper as to the etiology of cases of purulent ophthalmia of the newly-born not being necessarily gonorrhœal; he had seen a number of such cases where the mother was positively free from the disease. He uses in such cases very hot water with alkalies, usually borax, with best effect.

Dr. Knapp further stated that Ernst Henry Weber, physiologist of Leipzig, first introduced the use of cold water in treatment about forty years ago. It was the imbibition of water by the epithelial cells which caused pain during the use of cold water.

The President stated that he uses ice-bags as compresses to the eyelids, and has also used cold as well as hot water as a styptic in ophthalmic practice.

In reply to a question, Dr. Knapp said it was his practice to use ice-bags to the closed eyelids, but hot water for cleansing mucous membranes.

In closing the discussion Dr. Peck said that by the word *caustic* was implied a destructive agent, and by *astringent* the usual pharmacological acceptance of that class of agents. As the lines of discussion had turned upon the use of cold and hot water in ophthalmic treatment, he offered the statement that the final effect of hot fomentations and ice-cold lotions was the same. He suggested that an application of cold can only be continued as such by a thin layer of muslin or linen, taken from raw ice, transferred to the closed eye, and changed so soon as it acquired a temperature near to that of

the body; a hot fomentation or compress must be of several thicknesses of fabric, as a fresh laundried handkerchief, wrung out of hot water, covered with dry flannel, and renewed so soon as it became reduced to near the animal temperature. The term *cold compress* is an anomaly. He uses cold cloths in this way to combat acute forms of conjunctivitis; he also uses hot water saturated with boracic acid as an irrigant in ophthalmias attended with discharge. It is a well-attested clinical fact that patients like hot applications better than cold.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

THE MEDICAL COUNCIL'S AUTUMN SESSION—CONJOINT EXAMINATION SCHEMES—THE COLLEGE OF SURGEONS AND THE WILSON BEQUEST—NEW DRAINAGE SCHEME FOR LONDON—THE PUBLISHING SEASON—NEW WORKS AND NEW EDITIONS—THE ENTRIES AT THE MEDICAL SCHOOLS—OVER-PRESSURE IN BOARD SCHOOLS.

LONDON, October 18, 1884.

THE General Medical Council met October 7th. As might have been expected from such an essentially conservative body, Sir Henry Acland has been re-elected President for a third term of five years. I cannot chronicle any important proceedings on the part of the Council. Medical education and examinations were discussed, but it is of little consequence what conclusions the Council arrive at as they have no power to enforce their own recommendations. A considerable amount of time was spent in discussing Sir Henry Pitman's motion, sanctioning the proposed conjoint scheme on the part of the College of Physicians and the College of Surgeons. This has been mooted many times but has never come to anything. The object is to do away with partially qualified practitioners. At present, although the College of Surgeons examine in medicine and obstetrics as well as in surgery, it is only *legally* a qualification to practise surgery. Similarly the license of the Apothecaries' Hall is only *legally* a title to practise medicine and midwifery. There are still a good many men in practice who possess only one of these diplomas.

The license of the College of Physicians is a qualification entitling its possessor to practise all three branches. It is now proposed (not for the first time) that the College of Physicians should relinquish their right to qualify in surgery, and only give diplomas in connection with the College of Surgeons. In the discussion on this subject at the meeting of the Medical Council on the 8th inst., Dr. Quain opposed this scheme strongly, and referring to the Surgical College said: "That amiable fox living in Lincoln's Inn Fields, which never had a tail, went to the College of Physicians and said, How beautiful I am without a tail! do drop your tail and be like me." Sir Henry Pitman's motion was, however, carried, although the weak points in it had been pretty plainly pointed out by Dr. Quain in a lengthy speech. The instituting a complete diploma, qualifying in all branches of practice, and one which is accepted for all Government appointments, is one of the best things the College in Pall Mall ever did for the profession, and it is to be hoped it will think twice before relinquishing its right. It has, too, paid the College pretty well.

The best thing for the College of Surgeons would be to get their diploma recognized as a complete qualification likewise. They ought to be able to do something now, for it is estimated that the Erasmus Wilson bequest will amount to nearly two hundred thousand pounds, instead of one hundred and eighty thousand, as at first expected. One suggestion is that they should endeavor to obtain a charter transforming the college into a university, empowered to grant degrees in medicine and surgery, and located in splendid new buildings erected on one of the sites still vacant on the Thames Embankment.

Speaking of the Thames reminds me of the new drainage scheme of the Metropolitan Board of Works. Your readers will be astonished to learn that, after spending millions of pounds upon the drainage of London, a radical change should be necessary and desirable. What is proposed in the new scheme is virtually to construct an enormous conduit (which would, I suppose, be at least ten miles long) to convey the sewage down to the seacoast in Essex. When it reached the coast it would be necessarily (from the gradients of the conduit) far below sea-level, and to pump it into the sea at ebb-tide machinery would have to be erected still more enormous and costly than that now in use at Crossness and Barking. It goes without saying that this proposal does not receive unqualified or even unanimous approval from sanitary authorities. Economists have protested for years against the fearful waste involved in pouring all the sewage into the river, to say nothing of the pollution of the stream itself. The latter would be removed by the new plan, but the former would still go on. The *crux* is the enormous bulk of sewage with which we have to deal. Still something might be tried. Meanwhile the scheme just described is all that the collective wisdom of the Board of Works has been able to devise. It remains to be seen whether it will be carried into effect.

The approach of winter is, as usual, accompanied by increased activity on the part of medical publishers. Taking students' manuals only, quite a number of new books and new editions are either announced or have recently appeared, and of other works there is quite the usual supply.

A work which will be looked for with considerable interest is a volume of clinical lectures by Mr. Richard Quain, F.R.S., which is announced as being in the press. (This gentleman must not be confounded with his eminent namesake, Dr. Richard Quain, the editor of the "Dictionary of Medicine" which bears his name.) This venerable professor so seldom appears in print and has been so long retired from active practice, that his coming volume will be received with unusual interest.

Mr. Watson Cheyne announces another book on "The Antiseptic Method in Surgery." This (the second work by him on this subject) will doubtless contain some of the results of the researches in the Biological laboratory of the Health Exhibition.

New editions have appeared simultaneously of Erichsen's and Bryant's works on surgery. The former has been considered as the leading text-book for many years past now, although its diffuse and wordy style and its bulk have been great drawbacks to its use by average students. In successive editions it has swelled and swelled until in size it threatens to rival if not outstrip the "System of Surgery," of which a new and (by a rearrangement of type) smaller edition only appeared last year. The latter work, though, is likely to find a formidable rival in "The International Cyclopædia of Surgery."

A fifth edition of Playfair's "Midwifery" is announced. Since its first publication, only eight years ago, it has rapidly become the favorite text-book, to the practical exclusion of all others. Lusk's treatise has displaced it somewhat for the higher examinations, but for all others it is still widely read. A large measure of its popularity is due to the clear and easy style in which it is written. Few text-books for students have very much to boast of in this respect. The best one is, perhaps, the well-known "Manual of Surgery," from the pen of Mr. Timothy Holmes, the editor of the "System." Dr. Robert Barnes is also an able penman, and his work on "Obstetric Medicine and Surgery," written jointly by himself and his son, is certain, when completed, to find a large circle of readers.

Readers of works on medicine are less favored. The two standard books are "Roberts" and "Bristowe," and of both of these new editions have been issued during the

past eighteen months. The former is doubtless a useful compilation for examination purposes, but not an interesting work to read otherwise. Bristowe is perhaps a little more lively writer, but even he makes us long for a return of the literary grace which adorned the pages of Dr. Graves and Sir Thomas Watson. Both of these works, too, sound a very uncertain note in the matter of treatment. Numerous drugs are mentioned under the various diseases, but the directions as to their administration are very vague. We are now promised a new textbook of medicine in the form of a posthumous work by the late Dr. Hilton Fagge. It is to be in two volumes, and from Dr. Fagge's well-known learning and industry is likely to present a faithful reflection of the present state of medical knowledge, and more especially of the teaching at "Guy's."

The number of "full entries" at the medical schools for the winter session is between five and six hundred. By "full entries" is meant the number of students entered for the full course of four years at the hospitals. From this period of time eighteen months is remitted in the case of those who have served a pupilage of that duration with a general practitioner. This applies only to candidates for the ordinary diplomas. The Universities require the whole period of four years to be passed in hospital study, and the College of Surgeons exacts a curriculum of six years for its Fellowship from those who wish to take it from their hospital at once. Graduates in Arts are allowed a year off this.

The discussion on over-pressure in board schools, which was initiated by the publication of Dr. Crichton Browne's report on the subject, is still going on. It appears that after inviting Dr. Browne to inspect and report on certain schools, *accompanied by Mr. Fitch, one of the Government Inspectors*, the Education Department, not finding the report to their taste, first tried to suppress it and then endeavored to upset Dr. Browne's conclusions, and set Mr. Fitch to abuse him. Dr. Crichton Browne has opened fire on his assailants in the columns of *The Times*, and seems to be getting the better of them. The whole subject will probably be well ventilated when Parliament meets. Meanwhile, among the medical profession at any rate, the opinion is pretty general that it has been clearly proved that over-pressure does exist. The rate-payers have long thought so—but for another reason.

THE DANGER OF OPIUM-SMOKING AS A THERAPEUTIC MEASURE.

To the Editor of The Medical Record.

Sir: In the issue of The Medical Record for September 20th, page 317, I notice a short article in reference to "Opium-Smoking as a Therapeutic Measure." Now, while we will all agree with Dr. Thudichum that opium-smoking may prove a palliative and perhaps remedial agent in the cases mentioned, we must, I think, believe that the danger of establishing a habit attending the practice more than counterbalances its usefulness. That the prolonged use of opium in any form is apt to engender the "opium habit," we all know, and I believe that of all the modes of administration tending to such an end, that of opium-smoking is the most potent. This, I think, is exemplified in the graduates of the various opium dens that curse our land to-day. Witness the novice who, feeling a little indisposed, or it may be for the purpose of experiment, repairs to one of these nests of degradation. Now, he does not enter such with the intention of cultivating a habit, and if the possibility of such a danger was suggested to him, he would laugh at the idea. Yet, in nine cases out of ten, when he has finished his first pipe he has forged the first link in the chain that will bind him a slave to this powerful drug. Nor does he stop here; finding the effect so very pleasant, he returns again and again, until the chain is completed and he is bound body and soul to a master that knows no mercy. Now, if there is danger of establishing a habit in the man who, to allay his indisposition or satisfy his curiosity, inhales the fumes of opium, how much more danger is there to him whom suffering induces and his physician advises to resort to it? Why, a hundred times more, I think, and it seems to me that the practice of that man has been limited who can look upon the danger as being comparatively *nil*. Perhaps some may say, "We would not allow our patients to go beyond a certain limit of safety." Ah, but how are you to know just where to place this "limit of safety?" The line of demarcation is certainly not well defined, and when once beyond it all the advice or moral suasion in the world will not induce the poor victim to desist in his degrading habit. Degrading, I say, because, contrary to the opinion of Dr. Thudichum, I believe that the "stories told of the victims of opium-smoking" are not sufficiently colored. They lack the dark and dismal coloring that truly describes the wretched condition to which these poor unfortunates descend. Degrading, because it robs man of all his finer instincts; robs him of his intellect, and makes of him an object of universal commiseration.

I am well aware that there is nothing new or startling in the foregoing, but as the subject is one which cannot be too often referred to, and as many men, especially the younger members of the profession, are prone to act upon every suggestion brought to their notice, I venture to offer it as a protest against the practice of "opium-smoking as a therapeutic measure," and I trust it may not be altogether unheeded.

J. H. Carman, M.D.

South Amboy, N. J., September 23, 1884.

INTRAVESICAL INJECTIONS OF NITRATE OF SILVER.

To the Editor of The Medical Record.

Sir: At the close of an editorial on intravesical injections published in the issue of The Record for September 6th, occurs the following: "Nitrate of silver has been much used in this country and is still used in France; but the less of that material thrown into a bladder, so much the better for the patient."

Now, Mr. Editor, will you favor a large number of practitioners who are constantly using nitrate of silver injections (even the strongest solutions, in cases of cystitis, with the greatest benefit) with substantial reasons for the advice contained in this extract from your article? Many of us, accustomed to this practice, believe the traditional fear of making nitrate of silver injections into the bladder to be wholly imaginary, a veritable *bête noire*, as nothing but good results from their use in our hands in properly selected cases of cystitis, for which troublesome malady they may be safely applied and are often eminently curative after every other measure has signally failed.

The apostle of this practice, Professor Richardson, of New Orleans, one of the most conservative, able, and truthful practitioners in our country, has fully demonstrated in his clinical lectures and private practice, the best results to be derived from the employment of strong intravesical injections of nitrate of silver in cases of cystitis, and his statements are being rapidly endorsed by others in the profession.

In the *Philadelphia Medical News* of November 10, 1883, after a few remarks on the treatment of vesical catarrh, I took occasion to report a most aggravated and instructive case of cystitis treated successfully by the Richardson method, and referred to the favorable experience of others also who had employed it more extensively.

The attention which I then called to the views of Professor Richardson has induced many who, like myself, were no doubt prejudiced against the method, to boldly try it, and subsequent reports, published and by private letters, are most favorable to the practice, and confirm all that has been claimed for it.

For instance, Professor William Gardner, Professor of Gynecology in McGill University, of Montreal, who noticed my communication to the *News*, relates an experience very flattering to the method and recommended it in his lectures to the class. In gynecological cases especially, I venture to predict that there is a great future awaiting a more extended and systematic employment of the stronger nitrate of silver solutions in cases of cystitis. By such means, probably, operative procedures upon the bladder as a *dernier ressort* in rebellious cases of this malady may be obviated.

There are many physicians, in Texas at least, who, relying on the published statements of Professor Richardson, did not hesitate to accept the clinical facts he endeavored to impress, and are now daily employing intravesical injections of nitrate of silver in their practice. We have witnessed no such baneful results as intimated by you. Indeed, our surprise is that the practice is not more generally appreciated.

Professor Richardson's pathological views and rational treatment of cystitis by strong intravesical injections of nitrate of silver were published in the *Medical News and Abstract* for 1879.

It is my opinion that these should be more widely known and acted upon.

Very respectfully,

HENRY K. LEAKE, M.D.

DALLAS, TEXAS.

[We do not see that the success of nitrate of silver injections in properly selected cases of cystitis militates against our view, that the less of it thrown into the bladder the better for the patient; and we were fully aware of the successes and teaching of Professor Richardson when we wrote the article referred to. But there is a wide difference between "properly selected cases" and the indiscriminate use of this solution, which was a matter of every-day practice a few years ago, and is still the routine practice with some physicians.

From our "properly selected cases" we should certainly exclude simple acute cystitis. This point must seem so clear that we will not discuss it. But there are also cases of chronic cystitis which will be less benefited by injections of solutions of nitrate of silver than by other treatment. We do not consider these injections advisable in simple chronic cystitis. In chronic cystitis with vesical catarrh we have obtained excellent results with the nitrate injections; and we have also seen cases, and others are on record, in which the effect of injections of strong solutions of nitrate of silver were so violent as to cause very serious apprehension for the safety of the patient. And in our experience, those cases have done best in which weak solutions were first used, so as to accustom the bladder to the powerful astringent, and then the strength was increased up to the desired point.

There is another objection to the use of very strong solutions in many cases: they may cause such a degree of vesical tenesmus that it is absolutely necessary to administer large doses of morphia to alleviate the pain. In these cases we cannot regard the use of an irritant, at least so powerful as a strong solution of nitrate of silver, as advisable; and much better results are to be expected from iodoform, which, as Mikulicz has pointed out, is especially adapted to mucous surfaces; or from Küstner's method with 1.5000 solutions of corrosive sublimate injected through a funnel-tube. This is especially adapted to the treatment of chronic cystitis in women. We are very much inclined to look upon suppurative cystitis as an affection which should be treated as a suppurating cavity in any other part of the body; but with the disadvantage that we have here a cavity into which there is a constant flow of an irritating fluid—the urine; and that more favorable results would be obtained by cystotomy and thorough drainage; except in women, where the urethra is short and can be so widely dilated as to admit of drainage through it.

We do not, therefore, unconditionally condemn nitrate of silver solutions; we know that they act most excellently in "properly selected cases;" and in the sentence from our editorial, to which our correspondent refers, we did not necessarily intend to convey the idea that the less *quantity* of the silver used the better for the patient, but that the fewer cases in which strong solutions are used the better; the cases being, of course, selected. We cannot, however, agree with our correspondent that there is a great future for the stronger solutions of this salt in gynecological cases, but think that the methods of Küstner, already referred to, of Struppi, or of Fritsch and Jackson more rational, and more peculiarly suited to these cases. We heartily endorse the recommendation of Professor Richardson to inject a solution of common salt into the bladder when the silver solution is too irritating; and will add that we believe the salt solution plays no unimportant part in the result, especially if it be a strong solution. It is not at all improbable that it delays the decomposition of the urine, which is a chief cause of the unhappy results in so many cases.

To conclude, we have seen, as our correspondent says, cases cured by the strong solutions of nitrate of silver when other remedies had failed; and we have also seen a strong infusion of tea succeed when the patient was rapidly going down hill under the use of the silver solution. And when we say that the silver was aggravating the symptoms, we mean that the strong injections were so irritating, and caused such a degree of vesical tenesmus, that it was necessary to narcotize the patient in order to prevent what we believed to be a dangerous degree of shock. If, however, the strong solution does not cause such phenomena, we believe it to be, in properly selected cases, an excellent remedy, and we would not hesitate to use it.—ED.]

FLORIDA AS A HEALTH RESORT.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: In the April 26th number of THE RECORD appeared an article on the above subject by a Baltimore physician. I eagerly scanned subsequent numbers, expecting some one with facile pen to reply, as the views of the writer were very different from those heretofore published, and from those of physicians in active practice in this State, as well as from facts that can readily be obtained from persons who have been benefited or cured by this climate. For there are men and women in every section of the State—from the Georgia line to the extremity of the peninsula, from the eastern coast that is tempered by "that river of the ocean," the Gulf Stream, to the western shore that is kissed by the waters of the Gulf itself—who bless this "land of fruits and flowers," who speak in glowing terms of the climate that has transformed disease into health, and has changed the hectic flush to the "peach-bloom hue." Is it strange that one who has spent night after night in sleeplessness and pain, racked with cough and annoyed with expectoration, debilitated and enfeebled by months of sickness; and has had all this changed to nightly sleep, as sweet and refreshing as an infant's, the cough allayed, the appetite improved, the health regained—is it strange, I repeat, that such a one should speak in vindication of the sunny clime that has thus benefited him? Can the physician who has seen these changes occur be expected to seal his lips and tacitly admit that the climate of Florida is unsuited to diseases of the respiratory organs? There is scarcely a physician in the State who would not deny such a charge, and *prove* it untrue by patients who are or had been under his care.

In the article referred to, it is admitted that this climate is adapted to cases of rheumatism, chronic neuralgia, syphilis, and gout. We claim that the list of diseases that will be benefited or cured in this climate can be

considerably lengthened. And as physicians we not only claim it, but can prove it by incontestable evidence. A complete list, or a catalogue of the varieties of diseases, will not be attempted, but the kinds of diseases that experience has shown the climate of Florida most adapted for will be given. They are: Tuberculosis in which the deposit is incipient or limited, bronchitis, laryngitis, nasal and pharyngeal catarrh, asthma, nervous complaints, results of overwork, and chronic uterine troubles resulting from congestions. Those aged and invalid persons who, after battling with the storms of life and the rigorous winters of the North, now need warmth and rest and relaxation, enjoy our genial sunshine and rejuvenating atmosphere. There is a peculiar soothing, rest-giving quality of the atmosphere, which especially adapts it to those who are overworked and jaded, or of a nervous character. Before they have been here many days they get the refreshing sleep that has been absent so long. Nowhere in our whole broad land can such a man or woman so quickly get relief as here.

Although the annual rainfall is large (as it should be on this sandy soil), yet the winter months are of the *dry season*. And although we have some rain at this time, there are very few days that the invalid cannot spend a portion of in the open air.

As to humidity, this city will compare favorably with other places. It is less here than at other Florida stations of the Signal Service on the Gulf coast. The courteous and efficient officer at this station, Sergeant Smith, has placed his records at my disposal. (I would state here that he published in the April 4th number of the *Daily Times-Union* of this city an abstract of the meteorological observations at this station, covering a period of twelve years, which would be of interest to many.) I copy sufficient for comparison from the last reports published from all stations:

MONTHLY MEAN HUMIDITY.

	December, 1879.	January, 1880.	February, 1880.	March, 1880.	April, 1880.
Jacksonville, Fla.	77.6	77.1	69.4	63.7	63.0
Los Angeles, Cal.	67.9	65.0	67.0	72.6	77.4
Detroit, Mich. ..	82.1	79.8	75.1	69.6	65.9
New York, N. Y.	73.4	73.3	73.0	70.2	61.0

If space permitted I could introduce reports to show that the changes from warm to cold are not great or frequent. Northers, in the Texas acceptation of the term, do not occur here. Of course, when there is an extremely cold winter in the North, like the last, we have a little colder weather here than the ordinary season. It is about fifteen miles on an air-line to the Atlantic, hence the air is never too highly impregnated with salt or too "bracing." It would be hard to find a more equable and pleasant climate, and at the same time have all the advantages of congenial companionship and the higher civilization. During the fall, winter, and spring months the State is filled with invalids, pleasure-seekers, and those seeking investment, from the more northern, and I might say from every State and Territory, as well as from Europe. It has many advantages and a grand future. Improvement is the watch-word of the day. It is rapidly filling up with the best class of actual settlers. It is too late for derogatory writers to curb her onward march or still her reputation as a health resort.

I intended speaking of the great number of deaths of consumptives that was said to occur at Gainesville. But I have just received the July 19th number of THE RECORD containing an article on that point by Dr. Bradner. My evidence would simply corroborate his.

Yours respectfully,

E. M. NOLAN, M.D.

JACKSONVILLE, FLA., July 24, 1884.

A CASE OF HAY-FEVER IN AN INFANT.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: On the night of September 23, 1884, I was called to attend Mrs. P——, in her confinement. The labor terminated without anything unusual occurring to the mother. At the time she was confined she was suffering from a severe cold. When the child (a male) was born it gave a cry and stopped breathing. As it became purple I cut the cord as quickly as possible, and after rolling it from side to side and using nitrite of amyl it began to breathe with difficulty, as though something was in the windpipe. The eyes were inflamed and were opened only for a moment at a time, and its nose was discharging. The child was plump and well nourished and did not seem to have any difficulty in swallowing. I gave it a drop of whiskey in warm water every ten minutes, which revived it considerably, but it had to be watched and I worked for an hour with it. I gave it minute doses of tartrate of antimony which gave it some relief. Its greatest difficulty was in living between 9 P.M. and 3 A.M.; about 4 A.M. it would begin to breathe easier and would be comparatively easy during the day. I then gave it a prescription containing fluid extract of squills compound, paregoric, and chlorate of potassa, which gave it some relief, but matters continued about the same, being good during the day and nursing well but having the trouble at night. October 7th I gave it the following mixture:

℞. Sodic bromidi..... ʒ j.
Tinct. lobellæ..... gtt. x.
Tinct. opii..... gtt. iv.
Aquæ..... f ʒ ij.
M. Sig.—Teaspoonful at 8 P.M. and repeat in two hours if necessary.

That night it slept without any trouble and has been all right ever since. On the night of the 7th we had a frost and the day was cold. The case is very interesting on account of the age of the patient. The mother was Scotch and the father a Dane. There is no history of asthma or hay-fever in the family. If it was not hay asthma what was it? I do not think the medicine cured the little patient, and the symptoms and termination of the case are very suggestive.

Very truly yours,

S. B. SPERRY, M.D.

DELAFIELD, WIS.

TWO CASES OF TRAUMATIC DIAPHRAGMATIC HERNIA.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: The cases reported in your issue of October 11th by Drs. Kortright and Harris suggest the publication of the following cases, as they present many points of similarity. They came under my observation while an interne in Bellevue Hospital, and have not been before published.

CASE I.—A stout laborer, aged forty-three, was admitted to Ward 30, April 27, 1881. The history given was that he had been beating carpets upon a roof when a chimney near toppled and fell, burying him beneath the débris. He was thrown forward upon his abdomen, the bricks falling upon his back. He said the fæces "were crushed out of him." When examined at the hospital he was suffering slightly from shock. Simple fractures of the tibia and fibula and of the fourth rib left side were found. There were marks of contusion over the chest and abdomen. Great pain about the sacral region was complained of, making it impossible for him to sit up.

For two days all went well except that the bowels were obstinately constipated. Persistent vomiting then set in, with considerable tympanites, but no pain or abdominal tenderness were found. The pulse became rapid and feeble, although the temperature remained normal. The case was seen by several members of the visiting staff and the diagnosis of rupture of the intestine or a

paralysis from contusion suggested. A displacement of the heart's apex to the right was noticed.

Early May 2d the patient went into collapse and died quite suddenly. The vomiting had continued at intervals but did not become stercoraceous. The bowels remained obstinately constipated. The patient complained at times of dyspnœa. The autopsy was made twenty-four hours after death.

Upon opening the thorax the left chest seemed nearly filled with coils of intestine which extended upward as high as the third rib. The heart's apex was displaced upward and to the median line. The viscera of thorax and abdomen were removed together. A rupture of the left leaflet of the diaphragm was found nearly four inches long, nearer its posterior than its anterior border. Through this opening had passed about four feet of small intestine and several inches of the transverse colon. The intestine showed no evidence of strangulation; it was not even congested, but like the part remaining in the abdomen it was distended with gas. The left lung was compressed into a mass about the size of a fœtal head. The right lung showed slight œdema. The heart was normal. There was no evidence of pericarditis, pleurisy, or peritonitis. No external evidence of injury to liver, spleen, or kidneys. Considerable extravasated blood was found in the substance of the abdominal muscles and beneath them. A separation of the symphysis pubis of one inch was found, also of half an inch at the sacro-ilial articulation. The ligaments at both joints were ruptured but there was no fracture.

In this case the chest was never carefully examined; the pain which was often complained of was referred to the fractured rib. The tympanitic percussion, the displacement of the heart and absence of breathing over the left chest in front, even had they been made out, would have found their most natural explanation in a pneumothorax also caused by the costal injury.

Case II. occurred in the service of the late Dr. James R. Wood. The patient, a man about forty years old, was admitted to the hospital for a compound fracture of the left elbow, produced, it was reported, by a fall of forty feet from a building. The patient was in fair condition, and nothing in his appearance suggested serious internal injuries. On the following day the elbow was exsected by Dr. Wildman, the house surgeon. Very little blood was lost during the operation but the patient never rallied from it. He sank steadily and died in collapse fourteen hours after the operation and forty hours after the injury.

On opening the thorax a large mass was found projecting into it on the left side, which on examination was found made up of the stomach, much distended, the pancreas, the spleen, and about a foot of the transverse colon. These viscera about half filled the chest, crowding the heart to the right and the lung upward and backward. None of the displaced viscera bore evidence of any special violence or of any strangulation. Considerable extravasated blood was found in the substance of the abdominal walls and in the pelvic cavity.

An examination of the diaphragm showed a rupture three inches long in the muscular substance of the left leaflet, extending from the margin of the tendinous portion outward to within an inch of its border.

This specimen is now in the Bellevue Hospital Museum.

L. Emmett Holt, M.D.
23 Park Avenue, New York.

DEATH FROM THE INTRODUCTION OF A STOMACH-TUBE.

To the Editor of The Medical Record.

Sir: An unmarried woman, aged twenty-seven, with a history of chronic gastritis, was being treated by Dr. B——, an itinerant doctor, by introducing a stomach-tube into the stomach and removing the contents—afterward washing out the organ. The operation had been performed twice successfully. At the third attempt he claimed to have passed the tube into the stomach, when she fell back and immediately expired. I was present at the autopsy. The stomach was dilated considerably and in an advanced stage of chronic inflammation. Numerous spots of ecchymosis were present. The heart was pale, and there was fatty infiltration. No other organic changes were noticed. The remainder of the alimentary canal was healthy, as were the liver, spleen, and kidneys. She probably died from paralysis of the heart from the shock of the operation. No coroner's inquest was held. This case may serve as a warning as to what might happen in any trivial operation upon a patient with a weak and fatty heart.

A. D. Bundy, M.D.
St. Ansgar, Ia., September 30, 1884.

THE AVOWED OBJECT OF THE NEW YORK STATE MEDICAL ASSOCIATION.

To the Editor of The Medical Record.

Sir: In your editorial note concerning the New York State Medical Association, you say: "The main object of the Association is to secure to the profession in New York State representation in the American Medical Association." Did not the latter association, at its meeting in Washington last June, throw open its representation to every respectable physician who accepted its code or paid five dollars? It appears to me that if the sum in question will secure personal representation, it is hardly necessary to become a member of the New York State Medical Association for the purpose stated.

You further say: "The question will, therefore, doubtless be raised whether those counties in which medical societies have not changed their old code, and which are still entitled to representation, can send a double set." The true position of these societies is this: The action of the State Society has rendered the old code void in every county society in the State, so far as the power to discipline is concerned. Those societies, therefore, which have not formally adopted the new code are practically without any at all; they are in fact *no-coders*. To this complexion have they come at last.

Junius.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from October 19 to October 25, 1884.

Alden, Charles H., Major and Surgeon. Relieved from duty at Fort Yates, D. T., and ordered for duty at Fort Snelling, Minn. S. O. 125, Department of Dakota, October 20, 1884.

Vickery, R. S., Major and Surgeon. In addition to his other duties will assume charge of the office of the Medical Director during temporary absence of Major J. C. McKee, Surgeon U. S. A., Medical Director of the Department. G. O. 34, Headquarters Department of California, October 8, 1884.

Winne, C. K., Captain and Assistant Surgeon. In addition to his duties as Post Surgeon at Benicia Barracks, will also attend the sick at Benicia Arsenal, Cal. S. O. 122, Headquarters Dep't of Cal., Oct. 13, 1884.

Strong, Norton, First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Union, N. M. S. O. 198, Department of Missouri, October 4, 1884.

Phillips, John L., First Lieutenant and Assistant Surgeon. Transferred from Department of the East to Department of Dakota. S. O. 245, A. G. O., October 18, 1884.

Official List of Changes in the Medical Corps of the U. S. Navy, during the week ending October 25, 1884.

Bloodgood, Delavan. Promoted to the grade of Medical Director, August 22, 1884.

Oberly, Aaron S. Promoted to the grade of Medical Inspector, March 28, 1884.

Wells, Henry M. Promoted to the grade of Medical Inspector, August 22, 1884.

The Medical Record

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Original Articles.

CIRRHOSIS OF THE PANCREAS.

By CHARLES WARRINGTON EARLE, M.D.,

PROFESSOR OF OBSTETRICS, COLLEGE OF PHYSICIANS AND SURGEONS; AND OF DISEASES OF CHILDREN, WOMAN'S MEDICAL COLLEGE, CHICAGO, ILL.

THE occurrence of four cases of chronic inflammation of the pancreas in private practice, within the space of three years, has led me to review the literature on the subject with more than ordinary care.

That diseases of this organ are rare is undoubtedly true; but it is also a fact that comparatively little attention, up to this time, has been given to their investigation and study.

Bartholow says that so little is definitely known of diseases of the pancreas, that many systematic works omit the subject entirely. Atkin, in his large work, does not speak of disease of this organ. Hartshorn, editing Watson, devotes about fifteen lines to the consideration of this subject. Flint and Wood have only short articles, and Da Costa has collected the history of but forty-five cases, upon which he bases the brief remarks made in his work on diagnosis. One may look through scores of journals without finding an allusion to diseases of the pancreas.

For anything like a comprehensive article, we are obliged to go to Ziemssen, and here we are met by the statement that the great rarity of these diseases has hindered the more rapid development of our knowledge of the bearings and pathological changes in the organ.

It will go without saying that in the living or dead we neglect to examine this organ as we should; and for obvious reasons, however rare or frequent diseases of the pancreas may be, their diagnosis will remain obscure, and in the hurry of the post-mortem, often necessary, the gross appearance of the abdominal salivary gland will not be considered, and in many cases the organ will not be found.

CASE I.—Edward E——, aged sixty-five, American, contractor and builder. Was seen first November, 1880. Previous to this sickness he had never needed the service of a physician, and had always led a very active life. During the early part of the year he commenced to emaciate, and applying to a neighboring physician was given some medicine for malaria. He was not relieved, but was able to transact business. Throughout the summer months his appetite had changed greatly, and he had no desire for meats, but relished milk, mush, etc.

At my first visit I noticed his white anæmic appearance, and obtained the following personal history: His ancestry were long lived, and he had never had syphilis. There was nothing abnormal as regards his nervous system. His mental faculties were all good, and he only complained of a roaring in his head and ears. His lungs were without a trace of disease, but he was short of breath on account of weakness. The heart performed its functions perfectly, but there was heard a slight anæmic murmur. There was nothing abnormal in any of the abdominal organs, as far as I was able to examine them, and neither albumen nor sugar was found in his urine. His passages from the bowels were black and thin, with occasionally little lumps of blood and mucus. His pulse was 100; temperature, normal. The tongue perfectly clean, but, with mucous surfaces and integument, was almost white; indeed, this was his most striking symptom. He looked jaundiced, but a close examination showed it to be a whiteness of the tissues. The only painful spot on his entire body was at the epigastrium, and that was not severe and only produced by pressure. He complained of thirst and was occasionally nauseated.

I was unable to diagnosticate the case, but believed that he was suffering from some disease of nutrition; exactly the organ affected I was not able to determine.

I treated him for a few days with tonics, mineral acids, strychnia, and a generous diet. There was no improvement, however, and Dr. N. S. Davis saw him with me in consultation.

We did not attempt to name the disease, but concluded that somewhere in the line of lymphatics or in some part of the digestive apparatus, there was a very serious disorder, which in all probability would cause his death. He died one month after I made my first visit, having, however, passed into the hands of another professional gentleman.

In company with this gentleman I made the post-mortem. There was nothing unusual to be seen in any of the principal organs of his body, excepting the very marked whiteness of all the tissues, and not until I had removed nearly the entire viscera of the abdomen and came down upon a white indurated pancreas did I find the seat of disease.

The gross and microscopical appearance of this organ are given by Dr. S. J. Holmes, Lecturer on Pathological Histology at Rush Medical College: "Pancreas contracted; consistency abnormal; fibrous to the touch; color white. Under the microscope the connective tissue is extensively augmented, and there is obliteration of certain glandular vesicles, and atrophy of others, induced by the pressure of the new-formed connective tissue as it contracted in its maturity. There was slight fatty degeneration of the parenchyma of the kidney."

CASE II.—Mr. S. K. R——, aged fifty-seven, American. This gentleman, who had been connected with the printing and publishing establishments of this city for years, was first seen, professionally, January, 1882.

He was known among his associates as a most powerful and healthy man, though two years ago he commenced to fail in strength—yet up to within two months of his death he continued to transact business.

I learned at my first visit that about twelve years ago he had an extensive eczema, and has always been a dyspeptic. He has also been troubled with hemorrhoids, and even now every passage is attended with very great pain and some blood escapes. He has lost about sixty pounds. The color of his skin is very white, almost yellow, and yet the conjunctiva is perfectly white.

His pulse, respiration, and temperature are perfectly natural. He complains principally of pain in the rectum, and a slight sickness at his stomach when food is taken. He has also a feeling of weariness, and a consciousness that he is continually losing flesh. He does not like meat of any kind, or eggs.

He has been under the care of several physicians, who, in the main, have promised a cure. It was diagnosticated by one as a "severe physical and nervous prostration."

During the first months I treated him with pancreatine, pepsin, and the mineral acids, and at a visit made February 6th he claims that he has gained three pounds. He is having, however, alternate diarrhœa and constipa-

tion. His color is no better, but he does not complain of quite as much pain on the passage of his bowels. During all this time his pulse and temperature is natural. The pulse, if anything, is a trifle slow and without volume.

About this time, in a conversation with him, he asked me the direct question, and pressed me for an answer, as to whether I could assure him of a cure. After considerable hesitancy, and only after repeated solicitations upon his part, I told him that I was very much afraid that he had some disease that would ultimately cause his death. That was the last time I prescribed for him.

June 26th I made him an unprofessional visit. He was now being treated by rubbing, and was assured that in the course of a few days he would be greatly improved. His pulse was 78, temperature only 97½°, appetite poor. His bowel difficulty was entirely removed, and the pain which he formerly experienced had ceased. He ascribes the cure of this particular symptom to a root syrup with molasses injections. All the pain and soreness which he now feels is just below the ensiform cartilage.

He is expectorating a large amount of mucus, and has at various times vomited something which his attendants described as looking like fat. About two weeks previous to this visit he vomited a large amount of coagulated blood, the hemorrhage continuing for some eight hours, and the quantity escaping was estimated to have been about two pints; of course, it was mixed with saliva and other secretions.

At this visit it appeared to me that he was certainly failing, and that a mortal result was liable to take place at any time. He was still hopeful, however, and was encouraged by his attendants. He died June 30th.

In the presence of Drs. R. N. Foster, Cashman, Mr. J. D. Waller, and the writer, Drs. Graham and Haven made the autopsy. In compliance with the wishes of the friends, the abdomen only was opened. There was considerable fat between the integument and the abdominal muscles, but nothing abnormal as regards the position of any of the viscera.

The whiteness of the tissues, so marked at the autopsy of Mr. E——, was also present in this case. With this exception nothing pathological was found until the pancreas was reached. This organ was hard and slightly enlarged, and filled with spots plainly seen with the eye. The bowel was perhaps contracted in its calibre in some places, but in the rectum, where so much pain was experienced up to a short time before his death, there was absolutely no trace of disease.

There was no abrasion in the continuity of the mucous membrane of the stomach, and the hæmatemesis, which was so profuse a few days before his death, was probably caused by pressure of the enlarged head of the pancreas on some blood-vessel, or it may have been from minute capillaries in the mucous membrane of the stomach which could not be discovered with the eye. The microscopical examination was made by Professor Marie J. Mergler, and resulted as follows: "The pancreas measured nine inches in length, two and one-half in breadth at the head, two at the tail, and was one inch in thickness. The whole organ was denser than normal, and its surface presented numerous yellowish-white spots from one-fourth to one-half inch in diameter. These light portions were considerably denser than the rest of the organ. On microscopic examination there was found increased amount of connective tissue throughout the organ, especially in the light-colored portions."

Case III.—Mrs. R——, aged 36, American; housewife. Suffered with most terrible nausea and vomiting during the first three months of pregnancy. Seen in consultation with Dr. Haven. Died from exhaustion. Microscopical changes furnished by Professor Mergler, and correspond in every particular with the others.

Case IV.—Mrs. G. R——, aged 25, American; housewife. Passed through her first pregnancy and was safely delivered. Made a good recovery. Six weeks after commenced to cough, which persisted three or four weeks. Then a diarrhœa with great emaciation troubled her four months. During this time emaciation and whiteness of tissues were the most prominent symptoms. Died of exhaustion. The pancreas was hardened, connective tissue increased, glandular tissue obliterated.

Physiology.—In considering the diseases of an organ, the function of which we at best are not particularly well informed of, it may be well for us to study its physiology. That the pancreas is a racemose gland, and lies crosswise behind the stomach and the left lobe of the liver, and is supplied with blood-vessels and excretory ducts, is well known. Some questions are pending as regards its minute structure, but, on the whole, it is not unlike the other salivary glands. It is fairly settled now that it has a most important part to perform in the digestion of not only fats, but all kinds of food. It acts upon starch, upon albuminoid materials, and also upon the fats. Its power of converting starch into sugar is greater than that of the other salivary glands, and about all that may be said concerning the saliva may be repeated in regard to the product of this gland. Its power of digesting albuminoid compounds, as well as emulsifying neutral fats, has been fully demonstrated by a large number of physiologists. While the bile possesses nearly the same power, in all probability the complete digestion of fat is only perfected by the combination of the juices of these two organs, the liver and the pancreas.

Pathology of the pancreas.—"On account of the slight pathological importance of the pancreas, only the most important changes which occur in the glandular tissue or the ducts will be considered."[1] And yet four cases have died in my practice in four years from inflammation of this organ. The above quotation simply illustrates what I have already remarked, that the pancreas has not been studied as other less important organs have.

In addition to what I shall have to say in regard to the pathological appearances found in my cases, I desire to recapitulate what Rokitansky presents in regard to the abnormities and pathological conditions of the pancreas. In the first place, it may be absent; sometimes only partially developed, and the thyroid and thymus glands, with the pancreas, have been found in one mass; the gland may be enlarged simply from ordinary induration. It is diminished in size sometimes in persons of an advanced age, and sometimes, too, from chronic inflammation and adipose infiltration. There may be induration with enlargement, or extreme softening with relaxation and succulence of the tissue. Inflammations of this organ are either acute or chronic, and are either primary or secondary. When secondary, usually it is metastatic. In the acute forms of inflammation the gland is found reddened, congested, and relaxed; there is acute infiltration of the interstitial and cellular tissue. In the chronic inflammation there is hardening of the cellular tissue and obliteration of the glandular structure with sometimes permanent enlargement, followed occasionally with atrophy of the glands. New growths are not particularly frequent. Tubercle has never been discovered in the pancreas, and cancer rarely attacks the gland primarily. The pancreas may be the seat of an extensive accumulation of fat. Indeed, the whole organ may be converted into one mass of fatty tissue. Cysts, cartilaginous and osseous growths are found very rarely. Cancer when found involving the pancreas is usually a complication of extensive carcinomatous diseases of other organs. The ducts of the pancreas may be dilated, or compressed, or completely obliterated

Calcareous deposits in the excretory ducts, giving rise to obstruction or obliteration, may be found, or there may be an accumulation of secretion and consequent dilatation.

Orth differs in some respects in regard to the frequency of tubercle and primary cancer, but in the main agrees with the compilation given above. Ziegler presents

[1] Orth: Diagnosis of Pathological Anatomy, p. 333.

nothing of importance in his recent work on pathological anatomy.

Having now considered the physiology and pathology of the organ we are in a position to study the general symptoms of diseases of the pancreas.

The first symptom which I will notice is emaciation, proceeding to an unusual degree, and where it cannot be explained in the usual manner. We ought not to forget, however, that great loss of flesh is liable to take place in diseases of any of the digestive apparatus, and it will be only by excluding other diseases, and by carefully watching the case, that we shall be able to gain any information from this source. It is altogether probable that the function of the pancreas may be taken up and very largely compensated by the other digestive fluids, and we do not forget that experiments have been made upon the lower animals, and young dogs have recovered and lived after extirpation of this organ ; but this symptom (emaciation) associated with tenderness in the vicinity of the pancreas, and with no apparent disease of other neighboring organs, should be taken, it appears to me, as a possible indication of disease.

A second symptom, and one which, it will be remembered, was present in one of my patients, is a flow of saliva-looking fluid from the mouth. This occurred to a very considerable degree in the case of Mr. R——.

We are well aware that in diseases of the stomach the eructation or spitting of saliva-looking fluid is a very prominent symptom, and unless we take into consideration other symptoms, referable to the pancreas, this one symptom, it appears to me, loses its diagnostic value.

The presence of fat in the stools is another symptom. While the passage of fat in stools has been regarded as a symptom of very great value, it should be remembered that when a large amount of fat is taken with the food, the ordinary secretions of the digestive apparatus do not appear to be able to digest this unusual amount, and a fatty stool in such a case would be of no diagnostic value.

It appears to me that in the matter of fatty dejections it could be regarded as a diagnostic symptom only where we could demonstrate that a too great amount of fat was being taken, and that the other organs having to do with the digestion of fat were in a comparatively healthy condition.

One of my patients vomited a large amount of fatty material. I do not now remember of seeing this recorded as taking place in any other case of disease of the pancreas.

Among other symptoms, we should speak of pain and tenderness in the epigastrium; but we should also remember that a very great variety of diseases of the abdominal organs in this vicinity, such as diseases of the stomach, liver, lymphatics, aorta, spine, etc., are attended with pain and tenderness.

In the consideration of individual symptoms, which will receive attention at another place in this paper, I shall hardly mention the possible connection of pancreas disease with diabetes mellitus. This complication does occur in some cases, but the explanation of the last-named disease, as we now understand it, would demand a discussion relating to certain parts of the nervous system at greater length than the limits of this paper would permit. Sugar was not present in any of my cases.

Etiology.—Concerning the cause of pancreas disease, whether it be anæmia or hyperæmia, atrophy or hypertrophy, acute or chronic pancreatitis, nothing is definitely known.

It seems, however, that constitutional syphilis and alcoholic excesses have much to do with producing these diseases, and from Cases III. and IV. in my enumeration it would seem that pregnancy may be an exciting cause. Other causes have been assigned, but they are mostly problematical.

Trousseau says that the pancreas undergoes the same changes that the liver does in chronic alcoholism, and that the pancreas has six times been seen by the same observer to be affected; sometimes altered in the same manner as the salivary glands, which are described as soft, yellowish, and having their epithelium manifestly invaded by granulo-adipose degeneration, or shrivelled or atrophied like the liver of cirrhosis. I have recently had the opportunity of making an autopsy in a case where the immediate cause of death was dilatation of the aorta with valvular disease, but in a person who had a syphilitic history; indeed, in 1872 and 1873 he was under my immediate care. Among the organs involved which we found at the post-mortem, in addition to those having to do with the immediate cause of death, was hyperplasia and enlargement of the spleen, fatty infiltration of the liver, and marked evidence of *chronic interstitial pancreatitis*. I mention this case not because it has any particular connection with pancreas diseases, but as a case where syphilis was known to have existed, and where there was found, ten years after, evidence of chronic inflammation of the pancreas.

I desire now to pass in review the four or five principal symptoms which have been supposed to be always present in disease of the pancreas, and to examine into other diseases where we frequently find these same symptoms, in order to arrive at some definite conclusion as to the worth of the so-called pathognomonic indications. Such symptoms as emaciation, the presence of fatty stools, the profuse flow of saliva, etc., what are they worth to us in diagnosticating a case of pancreatic disease?

It must be remembered, at first, that in all diseases of the digestive apparatus which continue for any length of time there is more or less emaciation. We find it, too, in diseases of the stomach, and in chronic diseases of the intestinal canal. Particularly do we find emaciation in cancerous diseases of the bowels, where, in addition to marked cachexia in almost all cases, we find the loss of flesh is very great; there are, however, exceptions to this, and persons have been known to suffer from cancerous diseases of the intestines, verified by an autopsy, and yet lose but very little flesh. Extreme emaciation of the body usually takes place in stenosis of the bowels, whether it be from cancerous disease or other causes.

In the intestinal parasitic disease called anchylostomum duodenale, a malady which we know but little of in this country, emaciation is spoken of as one of the prominent symptoms. This is a disease where the parasite lives on the blood which it takes from the tissues, and not only does it abstract what it needs for its own sustenance, but as it changes its position it leaves wounds from which there is a constant escape of blood.

We have, then, here a disease with all the symptoms of chlorosis, with its attendant paleness of the general integument and of the mucous membranes, with great fatigue, dyspepsia, and palpitation of the heart, which will require great care to differentiate from other diseases of bad nutrition. The parasite gradually extracts blood from the mucous membrane of the alimentary canal, and in this way produces not only all the symptoms of anæmia, but the particular symptoms of emaciation of which I am now speaking. The fact, however, that this disease takes place in, or is imported from, tropical climates, will enable us to exclude it when we are trying to differentiate pancreas diseases.

Emaciation is also a symptom of a dilated stomach, a disease, by the way, which it appears to me takes place with greater frequency than, perhaps, the profession recognizes. In this difficulty, while the stomach is very large, with apparent obesity, yet there are all the symptoms of poor nutrition. The patient is pale, hollow-eyed, and is reduced nearly to a skeleton. There is also with this a real loss of physical strength.

We find emaciation, too, in cirrhosis of the liver attended with anæmia and loss of strength. This symptom in cirrhosis appears frequently early, and long before those more prominent symptoms, such as ascites, etc., which occur toward the end of the disease. In some

cases it is only when nutrition has become disordered and emaciation and loss of strength are noticed that the patient first realizes that he has some disease.

We find emaciation in splenic diseases with rigors and a fever, ofttimes of a hectic character, with sweats, œdema, slight jaundice and diarrhœa, the patients in the meantime emaciating rapidly.

This is a symptom, too, that we find present in certain nervous diseases, and along with the other symptoms of a unilateral progressive atrophy of the face we find emaciation taking place as a symptom. In Basedow's disease it is a very prominent symptom. In a paper which I presented to the Illinois State Society some years ago, I considered at length the symptom and progress of this disease, and placed on record the history of a case where the emaciation had taken place to such a degree that a lady weighing ordinarily one hundred and seventy pounds became reduced to probably ninety. In such a case, however, there are so many other symptoms present that we can at once exclude any probability of pancreas disease.

Emaciation is present in scrofulous and tubercular diseases, and proceeds to a very considerable extent with the fever and loss of appetite which we find in chronic pleurisy or empyema.

It is thus seen that if we place great stress upon the one symptom of emaciation to help us in making up our diagnosis in pancreas diseases we shall become involved in great perplexity, for we have already seen that many diseases, and many of them quite as obscure as those of the pancreas, are attended with constant and progressive loss of flesh.

In regard to the second symptom—that of the flow of saliva, or a mucous-colored fluid from the mouth—we find that this, too, is present in a considerable number of diseases, although not to the same extent that we find emaciation.

The attempt that has been made to base a theory that a sympathetic or vicarious relationship exists between the pancreas and salivary glands has no good foundation, and the increased secretion of saliva which is present in a very considerable number of chronic diseases of the stomach has no connection whatever with any function of the pancreas, and in those cases where a considerable amount of saliva is vomited in the morning, in all probability it has been secreted and swallowed during the night.

It has appeared to me, however, since I have watched Cases III. and IV. of cirrhosis of the pancreas in my practice, that there may be some reasons for expecting that the great abdominal salivary gland (the pancreas) may be influenced by the same causes which produce impressions on the salivary glands in the mouth. The demonstration of this must remain for future study.

In diseases of the nervous system we find an increased flow of saliva, but we are usually able to find some local paralysis as the direct cause. In progressive bulbar paralysis there is sometimes a constant flow of saliva from the mouth, sometimes watery and sometimes more like transparent mucus, and yet progressing to such an extent as to be of great annoyance to the patient. It is frequently present in facial paralysis and in some forms of neuralgia.

Coming to consider the presence of fat in the stools and other excretory products it seems that we really have in this a symptom of more importance than any hitherto mentioned, but it is not always pathological, as it has been observed in the fæces of healthy persons who are partaking of a greater amount of fat in food than was usual, and more than can be digested by the apparatus having this to accomplish.

It is also found in the stools of children apparently healthy, and in some cases the white lumps which we suppose to be undigested casein are largely made up of fats; the fatty acids combine with lime in forming them.[1]

It has been seen in the stools of patients suffering from slight jaundice and other evidences of a temporary disease of the liver. There is probably associated with this, at least in some cases, a partial occlusion of the pancreatic ducts, and recovery will usually take place.

Fat is found sometimes in the stools of persons afflicted with chronic jaundice, where there is occlusion of the ductus choledochus, either alone or associated with temporary closure of the pancreatic duct. If a large amount of fat made its appearance it would be an indication that the fat digestive functions of both organs, liver and pancreas, were probably impaired.

Fatty urine has been found either alone or in the same patient where fatty stools have taken place. Several cases of this kind are on record, and among the post-mortem revelations some disease of the pancreas has been found.

In looking over the literature for cases in which fat has been found in the urine, I was impressed with the similarity of the symptoms present in pancreas disease with fatty urine, and the history of cases described under the head of *chylous urine*.

In 1876 Professor Hollister read a paper on the subject of chylous urine before the Illinois State Society, and I cannot but notice the analogous symptoms as related in his paper.

The emaciation, epigastric pain, and loss of fat correspond to a very considerable degree with those same symptoms so frequently present in diseases of the pancreas. The theory was even then advanced as to the possibility of some undiscovered connection between the lacteal or lymphatic system and the urinary passages. More recently the thought has been advanced as to the passage of large amounts of fat from adipose tissue of the body to the blood, and thence through the vessels of the intestinal mucous membrane being set free. The discovery of the embryo of a round worm in the blood of those affected with chyluria has happily made its pathology certain. I wish I might say as much in regard to diseases of the pancreas.

The vomiting of fat is a symptom which I do not now remember to have seen mentioned in any article on diseases of the pancreas to which I have had access. It was present in the case of Mr. R——, and considering the fact that the head of the pancreas was considerably enlarged, so much so as in all probability to press against the duodenum, it is not surprising that a regurgitation took place.

If blood or bile may be diverted from the intestinal canal and thrown back into the stomach when pressed upon by a cancerous or any other indurated mass, it seems possible to me that the fatty food which has been partially acted upon by the secretions of the duodenum in the vicinity of the pancreatic and biliary ducts may be pressed back into the stomach and vomited as fatty matter.

In conclusion, I can only say that notwithstanding the fact that I have seen four cases of cirrhosis of the pancreas, and have studied faithfully all the literature at my command, diseases of that organ will still remain to me difficult to diagnosticate.

In my second case, more from the striking similarity in the general appearance of the two men than from any one particular symptom, did I venture to suggest pancreas disease. More by excluding everything else, it appears to me, must we base our diagnosis.

In my third case, Dr. Haven is kind enough to give me credit for speaking of disease of the pancreas as the possible cause of such a degree of emaciation; and in my fourth case the diagnosis was made and adhered to, the autopsy justifying the opinion.

It is not clear that fatty matter was passed from the bowel in either of my cases; but it was evident in both that the fats were not relished, were not well assimilated if taken, and that the system was destitute of those fatty constituents upon which blood and tissue must be replenished.

[1] Professor T. Uffelmann: Arch. Kinderheilkunde, 1880.

Notwithstanding the fact that fat was not passed in my cases, after excluding those cases where fat is normal or accidental, I should certainly regard the presence of fat in the stools as one of the most valuable symptoms in making our diagnosis.

The value of vomiting fat as a sign of pancreas disease must be studied in a greater number of cases. I simply place on record the fact that it was present in my second case.

Emaciation takes place in so many diseases that unless we find the majority of the other symptoms of pancreas disease present, it cannot be taken as a sign of great importance.

The extreme whiteness of the tissues will be regarded the most prominent symptom.

Treatment.—I have nothing to add which is new; but with the improvement which took place in the case in which I gave the pancreatine but a very imperfect trial, I certainly feel that the use of this remedy should be insisted upon until its value is fully demonstrated—either pancreatine as we have it in the shops, or in emulsion, or what would probably be better than either, the freshly prepared calves' or pigs' pancreas.

These preparations should be given some time after each meal, and without acids.

These remedies in the marasmus and infantile dyspepsias, where there exists an inability to digest fatty and starchy foods, should, it appears to me, have a more extended trial than we have hitherto given them.

Conclusions.—First, from the study of diseases of the pancreas which I have given up to this time, it appears to me that inflammations of this organ are more frequent than we have hitherto supposed.

Secondly, chronic inflammation of this gland is characterized by great loss of flesh, extreme whiteness of the tissues, and generally pain in the region of the affected organ. The appetite in some cases continues excellent, and the patient may take food until the hour of death. The pulse and temperature remain nearly normal. Among other symptoms which may or may not be present, is the passage of fat from the bowel or its eructation from the stomach.

Thirdly, the pathological processes produce the organ hardened, connective tissue increased, glandular and secreting structure pressed upon or obliterated.

Queries.—1. Are not a considerable number of cases commonly diagnosticated as pernicious anæmia, leucocythæmia, chlorosis, etc., due to chronic inflammation of the pancreas?

2. Have we here a disease to which the name "pancreatic anæmia" should be given?

Idiopathic Convulsions of the Tongue.—Dr. O. Berger relates, in the *Neurologisches Centralblatt*, the case of a woman, twenty-eight years of age, who was seized suddenly, without any prodromata, and in the midst of perfect health, with a peculiar spasm of the tongue. She experienced a sensation of tension in the supralaryngeal region immediately beneath the chin, and then the tongue, which seemed to the patient to be enormously swollen, underwent a number of undulatory movements. At the end of about ninety seconds the organ was projected violently forward, striking the dental arch with a perceptible noise or appearing between the lips. These convulsions occurred rhythmically, succeeding each other fifty or sixty times a minute. Speech and deglutition were impossible during the continuance of the attack, which, however, caused no other trouble. The author cites another case of a man, forty-two years of age, who had similar convulsions, not preceded, however, by the undulatory aura. This patient frequently wounded his tongue by closing involuntarily his teeth upon it. Dr. Berger referred these spasms to central excitation, cortical or bulbar, of the hypoglossus. A cure was obtained by galvanism and hypodermic injections of atropine.

YELLOW FEVER AT PANAMA—ITS CAUSE AND TREATMENT.

By C. H. WILLIAMSON, M.D.,

U. S. STEAMER ACAPULCO.

Having had some experience with yellow fever at different times, and most recently on the Isthmus of Panama, I am induced to give a few impressions formed in regard to the cause and treatment of that disease, though the views presented may prove neither novel nor interesting to the profession.

Yellow fever is unquestionably a disease of *marine* origin, and an essential element in its production is *salt-water*, with the organic vegetable and animal matter contained therein. This is established by the fact that the disease is never known to originate away from the sea-coast or where salt-water does not permeate. Ordinary malarial fevers may arise in any locality where heat, moisture, vegetation, and telluric influences combine to produce them, but the specific fever under consideration never can be produced without the additional element derived from the sea or its tributaries. Whether this is evolved from the decomposition of the vegetable or animal constituents of the salt-water is uncertain, but it is probable that *both* contribute a share. Dr. Domingo Freire, of Rio de Janeiro, who claims to have discovered the germ of the fever in the "cryptococcus exogenicus," says it is of *vegetable* origin, but does not, I believe, ascribe it necessarily to a marine source. I am inclined to the opinion that the *animal* matter of the infusoria in sea water, by its decomposition, plays a more important part in the causation of the disease than the *vegetable*. This is shown by the prevalence of the fever on board vessels into whose holds sea water has leaked and saturated the timbers, and it is probable that this water in its percolation has borne with it more of its animal than vegetable constituents, whose decomposition in the hot and unventilated apartments, combined with other favoring, deleterious agents, infects the atmosphere and generates or maintains the disease. This is chiefly the case with wooden vessels, as those built of iron rarely leak, have no timbers to saturate, and can be kept dry and clean; hence are always more healthy.

Another reason for the belief in the marine *animal* origin of the fever is, that in all tropical regions where it chiefly prevails *coral reefs* abound, and animal marine life is most abundant. These reefs, when left bare by the tides and exposed to the intense rays of a tropical sun, afford abundant material for rapid decomposition, and are doubtless most active agents in polluting the air.

The town of Aspinwall, on the Isthmus of Panama, is located on a small island almost surrounded by a coral reef. Here yellow fever is endemic, and sporadic cases occur at all seasons; but occasionally it becomes epidemic, as was notably the case in the spring and summer of 1880. At that time there was an unusual prevalence of low tides and the reef was exposed nearly all the time to the sun, emitting an extremely disagreeable odor, and cases of yellow fever were more numerous in the residences near and fronting the beach than in other localities, though they occurred in other parts of the town, where coral rock, broken from the reef, was taken to fill up low places and prepare for the foundations of buildings. A stop was soon put to this operation, but of late it has been renewed, and cases of yellow fever continue to occur. Two vessels that took coral rock as ballast had this fever break out on their voyages. If the germ of this disease is evolved, as I think it is, from the polyps of coral and other decomposing marine animal matter, it finds a most congenial atmosphere in which to develop and spread (and it only can do so where the conditions are favorable) at Aspinwall, where heat, moisture, and filth of every kind render it one of the most abominable places on the globe, and where the utter neglect of all sanitary measures causes wonder that human life can exist at all.

The germ of the fever, whatever it may be, is readily conveyed by fomites in the air from an infected place, and will rapidly show its effects wherever carried, if heat and all other concomitants are supplied, but in a temperature below 70° it cannot survive, and at once disappears.

That the disease cannot be conveyed by *personal* contagion is too well established a fact to admit of doubt, and was fully proved in the terrible epidemic that prevailed at Norfolk, Va., in 1855.

In regard to the treatment of the fever, as the kidneys play the most important part in its pathology, special attention should be paid to their function and every effort made to keep up their secretion as indispensably necessary to a cure. Suppression of urine is the worst symptom, and, however grave all the others may be, if that one is absent, there is hope of recovery. I have seen patients get well after having "black vomit," and all the other most unfavorable symptoms *except suppression*, and until that sets in the prognosis is favorable; but after it appears and continues for over twenty-four or thirty hours the case may be regarded as hopeless. In those attacks where from the onset the brain bears the onus of the disease and maniacal delirium appears early, soon subsiding into profound coma, death generally speedily ensues; but with the exception of these brain and kidney complications, and their proportion is not very large, the fever usually yields to prompt and proper treatment. This should be commenced at once with hot mustard baths of the lower extremities, and the administration of a brisk cathartic; the patient then put to bed and covered with blankets; given drinks to promote diaphoresis, and sinapisms applied over the epigastrium and region of the kidneys. If after free perspiration and purgation the fever does not subside, a tentative dose of fifteen or twenty grains of quinine may be given, but should not be repeated if it fail to reduce the temperature or increases the headache. Should it act otherwise it may serve to abort the disease, and can be repeated in a smaller dose in three or four hours. The fever persisting, the use of diuretics and refrigerant diaphoretics should be vigorously employed, particularly the former, to promote the urinary secretion. A combination of potass. nitrat., grs. x.; spts. nit. dulc., ʒ j.; tinct. aconit. rad., gtt. j.; aquæ, ℥ ss., every second hour, I have used with advantage, and found it generally retained by the stomach. The acetate or chlorate of potass. may be substituted for the nitrate in this prescription; or the *latter* may be given with sulphur. sublim. and pulv. carbonis (one as a germicide, the other as an antiseptic), with good effect. The action of the kidneys may also be promoted by the bitart. potass. as a drink, and the application of dry cups, turpentine stupes, and fomentations to the loins. When gastric irritability sets in, the stomach should be kept as quiet as possible and nothing given as long as it is quiet; but if it will not remain so, of all the remedies I have found nothing better than milk and lime-water to allay the nausea and vomiting. When "black vomit" occurs I have arrested it with ergot and tinct. ferri chld.

Having thus outlined the general system of treatment I have found most beneficial, regard for your valuable space warns me not to go more into detail of the variety of remedies employed to meet the different indications in the stages of remission and collapse.

The temperature of the apartment of the patient should be kept as uniform as possible, and during the entire period of the attack he should be kept moderately covered by bed-clothing and never subjected to a sudden change. His diet should consist of milk, gruel, and animal broths, given in very small quantities at a time and frequently repeated, and stimulants employed when indicated after the subsidence of fever. A return to solid food during convalescence should be very gradual, and great caution in this matter is imperatively demanded.

THE COCA LEAF AND ITS ALKALOID.

By WILLIAM OLIVER MOORE, M.D.,

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The importance which has been attached to the alkaloid of the coca leaf during the past few days in ophthalmic surgery has led me to bring together a few facts, historic and otherwise, for the general reader, knowing that doubtless they would prove of interest.

Cuca, or coca (erythroxylon coca), as called by the natives (erythroxylum peruvianum), is found wild in the mountains of Peru and Bolivia, and is also cultivated on high altitudes. The leaf is the part of the plant in which the active principle resides. These leaves, which resemble those of the tea-plant, are gathered from plants varying in age from one to upward of forty years. They are considered ready for plucking when they break on being bent, and are gathered in March (after the rainy season, this being the most abundant crop), in July, and in November. Good samples of the dried leaves are uncurled, with a deep green upper and a gray-green lower surface,and have a strong, tea-like odor. Bad specimens have a brown color and a smell resembling camphor The flowers of the plant are small and white, and are succeeded by red berries.

The seeds are sown in December and January; the cultivation of the plant gives employment to thousands of the people, and the annual production in Bolivia and Peru in 1864 was estimated at two million five hundred thousand dollars in value.

The green leaves are spread on coarse woollen cloths and dried in the sun, then packed in bags, which, in order to preserve the efficacy of the leaves, must be kept free from dampness. The leaves are worth in Peru seventy-five cents a pound, and cost here one dollar.

The habit of the natives of the western countries of South America to chew the coca leaf, has given much interest to this plant; the dried leaves are chewed mixed with quicklime, which is said to make its flavor more sensible to the taste. In the same way the leaf of the betel-nut is used by the East Indians.

The leaves are called *cuca* by the Indians, and *coca* by the Spaniards. It has been estimated that cuca or coca is used by eight millions of the human race, consuming thirty millions of pounds per annum, by chewing the leaves made into a ball mixed with lime. The leaves are deprived of their stalks, two or three ounces of them being used during one day. It is a powerful stimulant to the nervous system, enabling fatigue to be borne with less nourishment and greater ease than usual. A case is reported by Whittingham,[1] in 1850, of two men being buried in a mine eleven days before they could be dug out, during which time they were kept alive by the small amount of coca they had with them.

So much vaunted is the coca as a stimulant to nervous energy, that the poet Cowley[2] represents an Indian chief as addressing Venus, thus:

> "Our *Varicocha* first this *Coca* sent,
> Endow'd with Leaves of wondrous Nourishment,
> Whose Juice suck'd in, and to the Stomach ta'en
> Long Hunger and long Labor can sustain;
> From which our faint and weary Bodies find
> More Succor, more they chear the drooping Mind,
> Than can your *Bacchus* and your *Ceres* join'd.
> The *Quitolta* with this provision stor'd
> Can pass the vast and cloudy *Andes* o'er."

It was used by the Indians of Peru in ancient times, being employed as an offering to the sun; it was also thought that unless the priest chewed these leaves during his ceremonies the gods would not be propitiated. It is still held in veneration, and is thought by the miners to have an effect in softening veins of ore if chewed and thrown upon them. As to the effect of this habit of chewing the leaves on the system, much difference of opinion exists; on the whole the opinion of Dr. Smith[3]

[1] Thompson's Cyclopædia of Chemistry. [2] Cowley's Works, London, 1700.
[3] Peru as It is. London, 1839.

is in accordance with most of the facts. He says: "When used in moderate quantity it increases nervous energy, enlivens the spirits, and enables the Indian to bear cold, wet, great bodily exertion, and want of food to a surprising degree with apparent ease and impunity." Sir Robert Christison, in a paper read before the Edinburgh Botanical Society, April 13, 1876, on this subject, narrates some experiments on his students and himself, showing the harmlessness of the drug.

Bouchardat[1] states that coca has rendered to therapeutics value almost equal to the cinchona bark, classing it as a stimulant to the nervous and muscular systems, and ranks it as such with tea and coffee. He terms it also a "substance d'épargne," or that which prevents the rapid waste of tissue. The leaf was first introduced into France by Joseph Bain, a "pharmacien," about 1869, from which he made an elixir and wine. Vin Mariani, of recent introduction into this country, is made from these leaves; we have also a fluid extract, etc.

Cocaine, the alkaloid, was discovered by Niemann in 1855; its chemical formula is $C_{17}H_{21}NO_4$; its physiological action is apparently identical with that of theine, caffeine, guaranine, and theobromine. Dr. Alex. Bennett[2] was perhaps the first to conduct a series of experiments with this alkaloid, his observations being made on the lower animals, and he concludes from these that: 1. Cocaine is a powerful poison, inducing a series of symptoms affecting the nervous, respiratory, circulatory, and vaso-motor systems, which terminate, if the dose be large enough, in death. 2. In small doses, cerebral excitement not followed by coma, and partial loss of sensibility. 3. In large doses it produces cerebral excitement, complete paralysis of sensibility, tetanic spasms, and death. 4. It paralyzes the entire posterior column of the spinal cord, *also the entire system of peripheral sensory nerves;* but the anterior columns of the cord and the peripheral motor nerves are not paralyzed. 5. It does not produce muscular paralysis. 6. It usually produces *contraction* of the pupils. 7. It produces an increase in the salivary secretion.

These conclusions were arrived at after experiments conducted on more than one hundred animals of different kinds. Dr. Ott, in THE MEDICAL RECORD, 1876, finds similar physiological effects, except that he noticed the pupil *to dilate;* this is in accordance with our present experience. It is interesting to note that the neutral principles contained in coffee, tea, and chocolate, beverages so generally in use, are almost identical in chemical composition, and similar in physiological action, to cocaine; and this fact may lead us to find in either theine, caffeine, or theobromine local anæsthetic properties similar to the alkaloid of the coca plant; if so, it would be much cheaper and more readily obtained. Cocaine is a very deliquescent substance and it is hard to obtain crystals, yet by patience they may be.

The experiments with the cocaine hydrochlorate, by applying it to mucous surfaces, as the conjunctiva, has been known of only about one month, and, as far as I know, the American surgeons have been among the first to operate with its use. The first reports of these cases are in this journal (page 438). Since then many more have been made, with almost universal success.

In addition to the three cases reported by me in a former number, I may cite the following that are of interest:

CASE I.—Ella M——, aged twelve, leucoma adhærens, with partial closure of pupil. Operation of iridectomy (artificial pupil) performed under cocaine. A two per cent. aqueous solution was used of the hydro-chlorate, dropped into the eye, eight drops during twelve minutes. At the end of six minutes, four drops having been used, the conjunctiva and nasal part of the cornea were insensible; in ten, the whole cornea was anæsthetic; two minutes later the operation began, when it was noticed that the edge of the pupil could be seen, showing the mydriatic effect of the drug. The introduction of the speculum and section of the cornea were absolutely painless. Fearing that the iris might be sensitive (as I had seen in another case), I injected two drops of the solution through the corneal wound on to the iris surface, when to my delight the iris section proved to be painless. The operation did well, and was performed on October 17th. The patient was seen to-day, with no irritation.

CASE II.—Mary H——, aged eleven; leucoma, with anterior synechia. Iridectomy done at my clinic at the Post-Graduate Medical School, October 17th. The solution of four per cent. strength was used. In three minutes after the first two drops were instilled the conjunctiva and cornea were almost anæsthetic. To insure success two more drops were used, and at the end of seven minutes the operation was begun. The introduction of the speculum and section of cornea were not felt, but when the iris forceps was introduced and the iris cut the patient showed some evidence of pain. It was this that led me to use the cocaine solution directly to the iris tissue, as in the case previously mentioned. This patient has thus far done as well as customary.

CASE III.—One of lachrymal stricture; James F——, aged twenty-eight. This being the first case where the skin played a part in the operation, the experiment was considered by me doubtful. However, the four per cent. solution was freely applied above the inner canthus and over the openings to the tear passages, and in six minutes the parts were sufficiently numb to allow of the slitting of the canaliculus without pain. An Anel's syringe, charged with eight drops of the cocaine solution, was introduced into the cut canal, and the fluid forced into the nasal duct as far as it would go. After waiting four minutes the No. 8 probe was passed without pain down to the roof of the mouth; this was then removed and a lead wire introduced, the patient all the time having no sensation. In twenty minutes after the injection the lead wire, which was purposely left, was felt for the first time.

CASE IV.—Michael R——, aged thirty-six; oritis syphilitica. Complaining of much pain; not relieved by atropine; was treated by instillation of cocaine, two per cent. solution, with relief of pain in twenty minutes after its first use. The drops were used, two every three minutes till eight had been applied. At the end of half an hour the pupil was noticed to be larger than when the experiment was begun. Pain returned that night, but not so severe as before.

CASE V.—Mamie B——, aged sixteen, West Harley, N.Y.; operation at New York Eye and Ear Infirmary. Diagnosis, irritable stump. Thinking that the anæsthetic effect of cocaine might go deeper by a freer use, I used in this case some twenty drops, with some benumbing influence, yet not sufficient to warrant an operation for removal of the eye, so after waiting twenty minutes I removed the eyeball in the "old-fashioned" way.

CASE VI.—The following experiments were made upon my own eye: October 16th, at the Academy of Medicine, Dr. Agnew put in two drops of a two per cent. solution (Merk's) in my left eye, and in ten minutes the conjunctiva was insensible. Not only that, but in twenty-five minutes the pupil was dilated, and remained so for twelve hours; the accommodation was also affected. This took place in thirty-five minutes after the use of the drug, Jaeger No. 1 being seen at thirteen inches only, when with the unaffected eye my near point was five inches. In the morning the accommodation was restored.

October 18th a two per cent. solution of cocaine, extracted from the leaves by Foucar & Co., New York, was used; hitherto all the experiments were made with Merk's preparation. Four drops of this solution were by Dr. Minor placed in my left eye, it being in a normal condition during five minutes. At the end of eight minutes the conjunctiva was held by fixation forceps and without my knowledge. The anæsthesia lasted twenty-two minutes;

[1] American Journal of the Medical Sciences, vol. lxxii.
[2] British Medical Journal, April 18, 1874.

in twenty-five minutes from the first drop the pupil was dilated three-fourths its size, and the accommodation interfered with. This lasted six hours, the pupil remaining dilated ten hours.

Case VII.—M. B——, thirteen years of age: strabismus convergens. Finding in some operations for squint that the cocaine acted on the conjunctiva well, but that when the muscle was hooked pain was experienced, it occurred to me well to inject under the conjunctiva, over the site of the muscle to be cut, a few drops of the anæsthetic fluid; this was done in this case, six drops being injected, and the usual six to eight drops being used on the surface of the eye. This procedure caused the pain to be entirely abolished. No bad after-effect occurred.

This mydriatic effect of cocaine is well marked and will make it a valuable contribution to our list, as ophthalmoscopic examinations can be made, and the inconvenience of atropine not be felt, the effect on the accommodation in the former being of such short duration. The chemical formula of atropia is almost identical with cocaine. The mydriatic effect of the cocaine applied to the eye in man differs from the effect noticed by Dr. Bennett in his experiments, where the drug was given by the stomach in animals, he finding a contracted pupil the rule. As to the action of the drug in producing anæsthesia of the surface both of mucous membranes and the skin, that is a point still to be worked out. Having already trespassed too long on your time, I will reserve further experiments with this drug for the future.

October 18, 1884.

THE THERAPEUTIC VALUE OF A SEA VOYAGE IN CERTAIN CASES OF CHRONIC DIARRHŒA.

By J. W. STICKLER, M.S., M.D.,

orange, n. j.

While crossing the Atlantic, I have had opportunity to observe that almost every voyager has, during the entire trip, been more or less troubled with constipation. This condition has been referred to by others, among whom I mention C. Pitfield Mitchell, M.R.C.S., who states in his monograph on the "Pathology and Philosophy of Sea-sickness," that of twenty-nine recorded cases—a fraction only of the number actually observed—constipation was present in twenty-eight; in the remaining one early diarrhœa and subsequent constipation.

Indeed this condition is so common that almost every one anticipating a sea voyage provides himself with a suitable cathartic. The ship's surgeon told me that the most common complaint of all the passengers, steerage and cabin, is constipation, and oftentimes it is of a very persistent character, not being relieved by salines, but requiring drugs more active. So far as my observation goes, it is most obstinate in those who suffer longest from nausea and vomiting.

Constipation in some instances may be due to the presence of the hydrated peroxide of iron in the water used for drinking and cooking. The presence of the iron is due to the fact that the water is carried in iron tanks, in which there is quite a thick deposit of iron rust which is mixed with the water by the constant motion of the ship.

In many cases, however, there is but little water used till after constipation is well established. Some form of alcoholic stimulant, or one of the natural alkaline waters, is used to assuage thirst, and crackers, toasted bread, with perhaps gruel and assorted fruits, to satisfy hunger.

After the sea-sickness and prostration accompanying it have passed away, both water and solid food are partaken of more freely, and the iron therein contained may act as an astringent upon the gastro-intestinal apparatus. H. M. Bracken, M.D., L.R.C.S., who has spent much of his time on the Atlantic Ocean, writes me as follows: Sailors would ask for "black draught," the formula for which is (according to the Brit. Pharm.):

℞. Infus. sennæ ..... 14 parts.
Magnesiæ sulph..... 4 "
Ext. glycyrrhizæ..... ½ part.
Tinct. sennæ..... 2½ parts.
Tinct. cardamom. co ..... 1¼ part.
M. Dose ℥ j. to ℥ ss.

(The fact that they asked for a cathartic of their own accord indicated that they must have been troubled with constipation, which a comparatively few hours at sea had produced.) Passengers were generally served with pil. colocynth co. (Brit. Pharm.) (Dr. Gregory's favorite pill), or pil. colocynth co. et hyoscyami (Dr. Christison's favorite pill).

The percentage of passengers and crew affected at the beginning of the voyage was usually large. The condition would last some time and be quite troublesome if no laxative were taken. One dose generally gave relief, and was often sufficient for a voyage of such duration as between England and New York. Persons from the tropics suffering from diarrhœa were generally benefited by a sea voyage.

The fresh, pure air from the sea, change of diet, change of habit, etc., brought about the improvement.

Very few cases of diarrhœa *originated* on board. These were usually the sequelæ of other diseases, or the result of gluttony. When from the latter cause, a good purgative and twenty-four hours of strict diet would relieve.

I have known others, who on land had tried various kinds of medication for the relief of diarrhœa, but without success, not being able to remove the malady till they went to sea.

Such patients, after being forty-eight hours on the water, either had one small alvine discharge daily, or every other day. This condition remained till a laxative or cathartic was taken.

Great benefit was derived when nervousness was associated with the intestinal trouble, especially that form of nervousness which is the result of over-mental work.

Reynolds says: "Patients near the coast should get to sea. When undertaking a voyage care should be taken that suitable provision and nursing should be provided; but this, though possible for people in good circumstances, is often impossible for poorer persons. There can be little doubt that being sent to sea *without comforts* in an *advanced* stage of the disease is an aggravation of their condition, and that they should be spared this by judicious early travel. It is to be hoped that the time will come when all ocean passenger steamers will specially provide for the comfort and care of sick passengers. Cabins with extra attendance, and good sick cookery, would be a great boon for the helpless invalid from diarrhœa and dysentery."

In addition to the class of patients referred to by Reynolds, *i.e.*, those reduced to a state of extreme exhaustion, there are patients of ample means who are rendered unfit for the daily round of active business life by a troublesome diarrhœa, which does not readily yield to drugs, but which in most instances would be greatly benefited or cured by an ocean voyage.

Copper as a Prophylactic in Cholera.—The *Petit Moniteur de la Médecine* recently issued an extra edition which was devoted entirely to a consideration of cholera. Among many anecdotes there appears the following: One day during the height of the cholera scare in Paris, a blind man was playing the Marseillaise on an old trombone in a courtyard. Joseph Prudhomme, who was afraid of the disease, called to him from his window to desist in the name of public health from playing that contaminating hymn. "My dear," interposed his wife, "did you not notice that the instrument is copper?"

THE INDUCTION COIL—ITS VARIETIES AND THE DIFFERENTIAL INDICATIONS FOR THEIR USE.[1]

By A. D. ROCKWELL, A.M., M.D.,

NEW YORK.

When solicited to contribute something to the annual meeting of this Academy along that line of research in which I have been interested for so long a time, I hesitated in the selection of a topic. Of material there is plenty, and of sufficient importance. The whole field of the physics, physiology, and therapeutics of electricity lies open before us. The comparative value of its three subdivisions offers a subject for discussion and the relation of experiences, while the differential indications for the use of these various forms—galvanism, faradism, and franklinism—is of still greater importance and even less understood.

Vital in interest as are each and all of these themes, and others that occurred to my mind, they seemed to be excluded from discussion here, since it has been suggested that whatever is presented should flavor somewhat of originality, or at least be not altogether hackneyed; and these topics have, one and all, been discussed at various times in the current medical literature of the day, and are more or less fully considered in many of the works devoted to electro-therapeutics. The laudable aspiration of this Academy, then, as attested by the prospectus lately issued, confirms the aphorism that "originality is a thing we constantly clamor for," as well as "constantly quarrel with." Unfortunately, however, pure originality in thought or methods of expression is the gift of but few. Old and long-forgotten ideas are being constantly rehabilitated and brought forward under the guise of new and advanced opinions. In this way, much that would otherwise be lost or fall short of its proper utilization becomes, through a more persistent and perhaps clearer presentation, a practical part of the world's integral store of knowledge. While, therefore, none of the facts in physics that I propose here to present are in any sense new, yet there has been no general appreciation of them, and but little knowledge, even among those who have been endeavoring in a blind sort of way to utilize them, that such facts existed.

As to the few statements that are made along the line of therapeutics, the most that I can say of them is that they are the result of much experience and of very many carefully recorded observations, and if presented with any measure of clearness ought to be of some little service to those who are interested in but who have given little thought to the matter. But to my theme. There are two kinds of electro-magnetic machines that are presented to the medical man for therapeutical purposes. The first is termed a *separate* coil, and the second a *continuous or single* coil apparatus. The separate coil apparatus is the one most commonly used and the one most generally understood. The separate coil is the variety described and illustrated in every text-book of physics, but not in sufficient detail to make clear its mechanism when used for medical purposes. Craving the indulgence of those who may be thoroughly informed on these points, and who may therefore regard as primitive the remarks that follow, let me by the aid of the accompanying diagram (Fig. 1) describe the course and influence of the electric current in an ordinary separate coil faradic apparatus.

All induction machines are composed of not less than two coils. The first or primary coil consists of a large, well-insulated wire surrounding a bundle of soft iron wire, which forms a magnetic centre. Over this first or primary coil is wound a coil composed of several convolutions of fine, well-insulated wire for the induced current. The terminals of the first or primary coils of wire are united, one end to the battery that operates the coil, and the other to the part of the automatic rheotome according to the following description. As the battery is *the* important factor, let us start from it and follow the connections and action of the combinations that produce the effect:

The positive pole (P) of the battery is connected with the governor marked A (Fig. 1). The negative pole N of the battery is connected with the first end of the primary coil, while the last end of the primary coil is

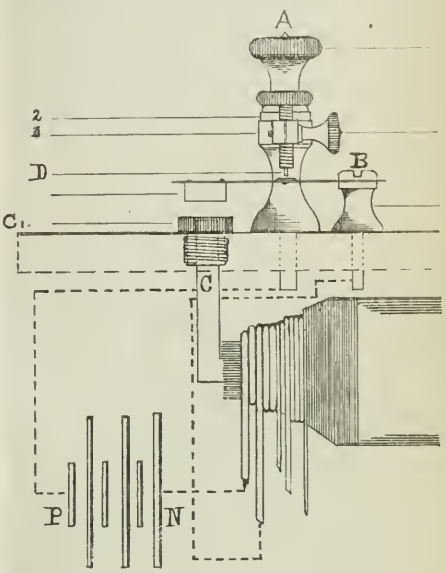

Fig. 1.

connected with the spring support B. The electro-motive force is conveyed from the battery through the primary coil to the spring support B (rheotome), thence to the platina-pointed screw of the governor D, and lastly to the battery, making the complete circuit.

In the centre of the coil and surrounded by the soft iron wires is placed a soft iron rod. One end of the rod is bent at right angles, so that the hammer on the spring is directly over and can move toward this soft iron rod, marked C. When the vibrating spring is resting against the platina-pointed screw D and the battery is connected with the coil, the current, as it passes over the wire of this primary coil, renders magnetic both the centre bundle of soft iron wires and the soft iron rod.

The magnetism is of sufficient force to attract the soft iron hammer on the spring, and draw it down or near to the magnetized rod C.

This movement of the spring severs the connection between the spring and the platina-pointed screw D and opens the circuit. The soft iron rod, therefore, loses its magnetism. The spring ceases to be held down, its tension being sufficient to raise it to a horizontal position, where it again rests in direct contact with the platina-pointed screw D. Again the circuit is closed and the process as described is repeated with inconceivable rapidity. By the action of the battery current as it is conveyed over the primary coil, and the influence of the magnetized bundle of soft iron wires, a current is induced upon the second coil of fine wire which surrounds the primary coil. This power of induction can be established to the fifth and sixth coil, and further if the magnetic field is properly arranged.

In the ordinary form of induction coil just described, the terminals of the secondary or fine wire coil are free and in no manner connected with the primary circuit.

[1] Read before the annual meeting of the American Academy of Medicine, at Baltimore, October 28, 1884.

The influence of magnetism produces a current which we call pure induced.

In the continuous coil apparatus, on the contrary, we not only receive the inductive influence, but the primary influence as well, since it is carried over in combination with the induced currents. Although called a continuous coil, it is really made up of several distinct coils, and each successive coil increases in length but decreases in thickness. These coils are wound over each other, and are tapped at different portions of their length, but unlike other forms, they make direct connection with each other. This accounts for an apparent contradiction of terms that might prove confusing.

These coils are for convenience of illustration represented by the upper straight lines ⎯, ═, ≡, ≣ (Fig. 2), termed respectively the primary, first, second, and third induction coils. The letters A, B, C, D, E represent the different posts of the continuous coil apparatus to which the conducting cords are attached, while the numerals 1, 2, 3, 4, etc., indicate the combinations by which are obtained ten different qualities of current. The short line marked 1, starting from A, represents the current from the short, thick, primary coil marked ⎯. Second line (2), current from the primary and first (═) induction coils combined. Third line (3), current from the primary and first and second (═, ≡) induction coils. Fourth line (4), current from primary, first, second, and third (═, ≡, ≣) induction coils. Fifth line (5), current from the first induction coil only. Sixth line (6), current from the first and second induction coils. Seventh line (7), current from the first, second, and third induction coils. Eighth line (8), current from the second induction coil. Ninth line (9), current from the second and third induction coils combined. Tenth line (10), current from the third induction coil only.

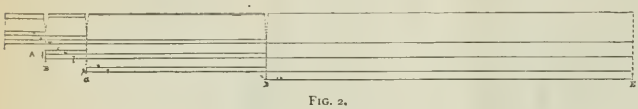

Fig. 2.

Therapeutical considerations.—When we consider the many combinations that are possible in the continuous coil apparatus and the different qualities of current that result therefrom, its general superiority over the separate coil is sufficiently evident; and this superiority becomes more marked if we examine into the varied physical and physiological effects produced by these combinations.

Our object of inquiry, however, is not as to the relative merits of different machines, but as to the comparative value of and the differential indications for the use of the various combinations of the continuous coil apparatus. This point of inquiry, although less important than when it relates to the two forms of dynamic electricity, is yet of no little account, and in some respects has been found to be more difficult of solution.

Notwithstanding the many qualities of current that are derived from the continuous coil, I have, after much observation, reduced to three the number of combinations that seem to be worthy of differential consideration.

Every therapeutic result that can be obtained by any of the ten combinations heretofore considered, will in all probability result from the use of some one of the following:

1. The current from the primary coil as represented by the line marked 1 (Fig. 2).

2. The current from the primary and the first and second induction coils in combination, as represented by the line marked 3.

3. The current from the primary and the first, second, and third induction coils in combination, as represented by the line marked 4.

The primary coil yields a current of large quantity but of small tension, owing to the fact that the wire of which the coil is composed is short and thick. It is worthy of note, however, that this current has considerable chemical power. It will burn iron or steel, giving forth a bright deflagrating spark, and will readily electro-plate, an effect not obtainable with any of the induction coils, either alone or in combination with each other. This current is apparently very weak, and induces but slight muscular contractions in the healthy person. In occasional pathological conditions, however, this mild current acts with unexpected energy, producing muscular contractions far exceeding in vigor those that are called forth by the stronger action of the induction coils.

On account of its mild but efficient action the current from the primary coil is preferable for applications to the head and the more sensitive portions of the body, and it will as a rule relieve pains of a true neuralgic character, and especially when great tenderness exists along the course of the nerve, far more effectually than the current from any of the induction coils. It is impossible to account for this frequently observed fact, without it be ascribed to a combination of the battery and the inductive influence. When dealing with an agent so subtle and so little understood as electricity, it is difficult to express one's meaning in terms altogether satisfactory, but that such a combination is active and effective is evidenced by the readiness with which electrolytic effects are produced. Asthenopia is a symptom that I have known to be greatly relieved and even cured many times by electricity, but more especially through the use of the primary coil. The tired, aching eye is both temporarily rested after each sitting and permanently strengthened by continued treatment. There seems to be little appreciation, either among ophthalmologists or general practitioners, of the great relief that may follow this treatment in the many cases where the eyes ache severely, if used even for a little time before breakfast or at twilight, or where neuralgic pains exist in or near the eye, or where there is annoyance from muscal volitantes.

As we include in the circuit with the primary the various induction coils, the current increases in strength with each coil that is added. With the addition of the first induction coil a much greater strength is apparent, but the combination has no marked physical or physiological effects that need detain us. By including also the second induction coil in the circuit, however (line marked 3, Fig. 2), we obtain a current of a peculiar and unique quality. Like the primary coil, it will electroplate, but unlike it, it will not burn steel or iron. The peculiarity of this combination of the coils is that the maximum of power to contract muscular tissue is here obtained. Each additional coil now that is attached simply gives a decreasing contractile power. Why the maximum of current strength is reached in the combination of the primary with the first and second induction coils it is difficult to say, excepting as we ascribe it to the law of harmony or polarization that is brought about by properly conditioning the magnetic centre of the helix, the several coils composing the helix, and the battery influence acting upon the coils. The current from this combination is not at all pleasant; it is keen and cutting in character, and with its strong contractile properties it is peculiarly adapted to those cases where powerful impressions are called for. Hence in not a few cases of paralysis where the response to galvanism is perfect, but where there is a diminution of farado-muscular contractility, I have found it preferable to any of the other qualities of current to be derived from the continuous coil apparatus.

In superficial forms of anæsthesia it is, perhaps, in no way superior, but in certain persistent and more deeply seated forms of lost or perverted sensibility it is decidedly more efficacious than other combinations. Its greater contractile power over muscular tissue, both voluntary and involuntary, renders it most efficacious in

cases of menstrual suppression, and also for atrophied conditions of the uterus, for which so much has been done by electrical methods of treatment. In cases of dysmenorrhœa, as well as in the various neuralgias, my experience leads me to exclude its use. Faradism has been used, and with success, to destroy the fœtus in extra-uterine pregnancy. While I greatly prefer the galvanic current, having always used it without the slightest ill effect, yet if the faradic is employed I should not recommend the current from the coils now under consideration, but the one presently to be described; for with this latter form we obtain effects equally destructive to the fœtal life and with less violence to the contractile tissues of the mother. There are several other differential points connected with the use of this series which suggest themselves, but they are of minor importance.

When we include in the circuit not only the primary and the first and second, but also the third induction coil as represented by the line marked 4, effects are obtained more interesting and satisfactory than from any of the other combinations.

These effects are pre-eminently tonic and sedative in character, and give for this quality of current a range of usefulness wider than can be ascribed to the others. There are but few, in all probability, who at this day are unfamiliar with the term general faradization, and who do not understand that by it is meant the application of the faradic current to the entire surface of the body, from the crown of the head to the soles of the feet. It is in the operation of general faradization, when we desire to obtain the best constitutional tonic effects that electricity is capable of giving, that we resort to this combination of the primary and induction coils. Its action on the motor and sentient nerves is less severe, and its general effects far more agreeable. For the relief of that great army of symptoms that are so familiar and so perplexing to those who have had much to do with neurasthenic cases, there is, according to my experience, nothing to be compared with it. Even the galvanic current by the method of central galvanization, so important in its direct effect upon the central nervous system, falls short of the therapeutic results that follow well-directed applications of general faradization. When persistent failure follows endeavors along this line of electrization, the cause of failure must be ascribed to hasty and faulty methods of administration. In no department of therapeutics is it of more importance to be thorough in detail. He only will achieve the best results who appreciates this fact, who is willing to inform himself as to the *modus operandi* of the methods, and who will devote in individual cases a reasonable degree of time and patience in carrying them out.

An Antipyretic Formula.—The following is recommended by Dr. de Giovanni as a substitute for quinine, in which the latter is ineffective or injurious in its effects (*Rivista Clinica*, No. 8, 1884): Ergotine (Bonjean), fifteen grains; tincture of valerian, half an ounce; water, three ounces; to be taken during the height of the fever or in the period of remittance. Usually the good effects are obtained after one or two doses, but the remedy should be continued for some time after the subsidence of the fever. In rebellious cases the author substituted with benefit cherry-laurel water, one-half to one drachm, for the valerian. The best results were obtained in intermittent fevers, but good effects were seen also in remittents, in the hectic of incipient phthisis, and even in puerperal fever.

Bicarbonate of Soda in Iodoform Poisoning.—Dr. Behring states that bicarbonate of soda is an antidote in poisoning from iodoform. Since the latter drug is eliminated in the urine as an iodic salt, the author assumes that it abstracts alkalies from the blood. By supplying the alkali thus withdrawn from the blood he believes that the system may acquire a special toleration for iodoform.—*Rivista Clinica*, No. 8, 1884.

Progress of Medical Science.

German Measles.—It appears to be a somewhat general opinion that Rötheln, or, as it is not infrequently called, German measles, is a disease of such minor importance as to be unworthy of scientific research; but a disease, the victims of which succumb as early as the fourth day, must be of sufficient importance to demand our attention and the best efforts of our armamentarium. Dr. W. A. Edwards, during the winter and spring of 1881–2, studied in the Philadelphia Hospital over one hundred cases of the disease, and the results of his observations he details in a paper in the October number of *The American Journal of the Medical Sciences*. As regards the diagnosis, he says the eruption appearing on the third day, first in the face, its rapid extension, its gradual shading off into the surrounding skin, its elevation, more particularly in the centre of the patch, which is also the brightest in color, together with the fact that desquamation first shows itself there, are all points which, as far as the eruption is concerned, render the diagnosis plain; furthermore, the rash almost at once occupied the whole body, and never presented a crescentic outline. The extreme drowsiness during the eruptive stage is a symptom upon which Cheadle lays some stress. It is Dr. J. M. Keating's experience that however severe the attack may be, or how diffused the eruption, the contour of the face is never lost, and that by looking properly you can always see the zygomatic arch; this, he observes, is always obliterated in cases of either measles or scarlatina that are severe in character. Sore throat was always present; in scarlatina it is directly in proportion to the type and severity of the disease; the more laryngeal character of the cough in Rötheln is also worthy of note. The pulse remains low, that is, much lower than a case of like severity of either measles or scarlatina. The fact that Rötheln propagates itself, and never gives rise to either measles or scarlatina, and, moreover, does not protect from these diseases, is a further diagnostic point that should claim our attention. Dr. Edwards highly recommends the application of oleaginous preparations to the skin during the stages of eruption and desquamation; in the former stage for the comfort of the patient, and to allay itching and aid in the reduction of the temperature; in the latter, to prevent contagion, as all of his cases underwent desquamation, and in all probability the contagion is carried by these fine scales.

Iodoform-forming Bodies in the Expired Air of Diabetics.—As is well known, Petters, Kaulich, and others have found acetone, revealed by its peculiar odor, in the expired air, the urine, and the blood of diabetics. Later investigations have proved its presence in the urine by chemical reactions, but methods for recognizing it in the expired air were less available. Several new acetone reactions having been recently discovered, Dr. Nobel attempted to reach results more accurate than have been hitherto obtained. The urine of the diabetic patient contained no acetone on examination, but some days after an exclusive fish-diet was begun it contained large quantities. The expired air was thus examined. It was first conducted into a Wolff's bottle, filled with distilled water, and after half an hour a solution of iodine in iodide of ammonium and liquor ammoniæ was added. By the next day a yellow precipitate was seen at the bottom of the flask, which on microscopic examination showed the iodoform tablets most clearly. On the other hand, the urine of another diabetic patient, which only gave a weak acetone reaction, showed only a slight separation of iodoform. On another occasion the air was passed through the water for an hour, the latter was distilled for six hours in a water bath at 146.4° F., and the distillate was divided into three equal portions. To one the above-mentioned test solution was added, and a copious precipitate of iodoform obtained. To the sec-

ond a few drops of mercuric chloride were added, and then enough caustic potash to render it alkaline; it was then filtered and ammonium sulphide added; this caused a black precipitate of sulphide of mercury (Gunning's reaction). The third portion yielded a positive result with sodium nitro-cyanide and liquid ammonia (the acetone test of the author). No doubt remained that the iodoform-making substance was acetone. Continued distillation for an hour gave no more acetone, though the iodoform reaction revealed $\frac{1}{10000}$ milligr. On another occasion the distillation was made at the temperature of 176° F.; and after twelve hours the neutral distillate, which gave distinctly the iodoform reaction, was treated with spongy platinum, and the presence of acetyl-aldehyde at the beginning of oxidation was proved by the reduction of ammonia-silver solution, and by the color-test of the author (sodium nitro-cyanide, caustic potash, and acetic acid). By further oxidation acetic acid was formed, which reddened blue litmus-paper held over it; by careful neutralization with very dilute caustic soda, a red color, which was destroyed by dilute sulphuric acid, was obtained with ferric perchloride. Thus, beside acetone, ethyl-alcohol was found in the air expired by this patient. Regarding the destiny of alcohol in the animal organism, according to some it is oxidized for the most part, and, therefore, must have a nutritive value; while, according to others, the greater part of it is excreted, unaltered, by the kidneys, skin, and lungs. However this may be, it is evident that no conclusion can hence be drawn as to its behavior in the bodies of diabetics, in whom the oxidation-processes are altered so much owing to irregular tissue-changes. The alcohol formed in such subjects may possibly be excreted unaltered for the most part, which would agree with the above results.—*London Medical Record*, August 15, 1884.

Cholecystotomy.—In *The American Journal of the Medical Sciences* for October, 1884, Drs. J. H. Musser and W. W. Keen publish an article on cholecystotomy, in which they relate two new cases, with a table of all the hitherto reported cases, thirty-five in number. The first case was that of a man, aged thirty-two, who had had attacks of biliary colic for five years, followed by jaundice, until he was reduced in strength, and had chills and fever threatening life. Dr. Keen attempted cholecystotomy, the incision being made over a region of dulness believed to be the gall-bladder. This dulness was found to be due to an inflammatory mass, which glued together the gall-bladder, colon, and intestine. No stone could be detected. The wound was closed, and recovery ultimately followed a course of Hathorn water at Saratoga. The second case was also that of a man, aged thirty-one, with acute gastro-intestinal catarrh, followed by jaundice, enlarged gall-bladder, and symptoms of internal suppuration. The enlargement of the gall-bladder was demonstrated by the hypodermic needle, but the fluid was not bile. Dr. Keen performed cholecystotomy, using a large hollow-handled spatula to drain off the twenty ounces of fluid contained in the gall-bladder. The gall-bladder was found to be seven inches in depth, but neither by finger nor probe could any gall-stone or the orifice of the duct be found. A biliary fistula was established, and bile was discharged through it the next day. The patient died a week later of exhaustion. The post-mortem examination revealed inflammatory closure of the cystic and common ducts at the mouth of the gall-bladder and at the duodenum. Dr. Musser in his medical comments analyzes at length the causes, symptoms, and diagnosis of biliary obstruction, under the heads of jaundice, tumor, pain, and suppuration, especially in relation to gall-stones and other foreign bodies and diseases of the ducts. He points out the means by which a just conclusion may be reached, and that cholecystotomy should be resorted to early in the case rather than wait till the blood is disorganized and the liver softened and made functionally useless. Especially is this true in view of the low mortality of the operation, there having been (excluding Gross' incidental case) only nine deaths in thirty-four operations, and of the fact that Mr. Tait has done thirteen operations, by far a larger number than any other operator, all of which have been successful. In his surgical comments, Dr. Keen discusses the surgical means of diagnosis by aspiration, with or without probing through the canula, and by acupuncture, both of which, when properly done, he commends. He also strongly urges an early laparotomy, followed at once by cholecystotomy, if found advisable, and condemns the attempt to provoke or to wait for adhesions. Indeed, upon this disregard of adhesions hinges the whole of our modern progress in abdominal surgery. He points out that to Bobbs, of Indiana, and to Sims, both American surgeons, is due the credit of first performing and practically perfecting the operation. He advises the formation of a biliary fistula, rather than sewing up the gall-bladder, and disapproves, as a rule, a removal of the gall-bladder, as adding a new and usually a needless danger.

Dyspeptic Coma.—Dr. Riess has observed a number of cases resembling in their principal features the picture depicted by Kussmaul of diabetic coma. But in no instance was there any glycosuria, the coma occurring with anæmia, nephritis, and carcinoma of the liver and stomach. In almost every case the chloride of iron test gave negative results, showing that the trouble was not due to poisoning with acetones. The author concluded that the symptoms of diabetic coma, for which he proposes the name of dyspnœic coma, may be also excited by a falling off in the proportionate number of red blood-corpuscles. Dr. Litten has observed the characteristic chloride of iron reaction of the urine in twenty-five non-diabetic patients, and concludes that it may be found exceptionally with any disease. In only one of these cases did he observe the dyspnœic coma of Kussmaul. He saw, however, several cases in which there was the peculiar odor of the breath and a soporific condition, but without any of the respiratory disturbances described by Kussmaul. He thought, nevertheless, that the two conditions were essentially the same, and were caused by poisoning from some substance produced in the digestive canal. This is probably the same substance to which is owing the peculiar odor of the breath and the characteristic reaction of the urine. This was supposed to be ethyldiacetic acid, but Frerichs denies the identity of the two substances.—*Allgemeine Medicinische Central-Zeitung*, No. 68, 1884.

The Physiological Action of Digitalis.—In the October issue of *The American Journal of the Medical Sciences* Dr. Nickles, of Cincinnati, summarizes the present state of our knowledge of the physiological action of digitalis. The doctrines now universally taught regarding the action and uses of digitalis differ in a number of important points from those held two decades ago. Then we were taught that digitalis is essentially a sedative, affecting strongly the nervous system, thus causing feeble and slow heart action. Now the latest authors teach that the nervous system is only secondarily affected, while the heart is directly influenced, its action becoming more powerful though slower. Twenty years ago we were taught that digitalis is a diuretic, directly acting upon the kidneys, thus producing in many diseases a greater secretion of urine. To-day we are told that digitalis does not act upon the kidneys at all, and only secondarily affects the secretion of urine by causing a change in the systemic circulation. In one point, there is universal agreement, that digitalis recklessly used may produce the most disastrous effects, and that these may occur quite unexpectedly in consequence of cumulative action. But not only in regard to the *modus operandi* do present authors differ from their predecessors, but also as to the therapeutic indications. Two decades ago digitalis was held to be indicated when the heart's action is too powerful; now we are informed that it is useful only when the heart's action is too feeble. Then author

taught that digitalis will control, and hence favorably influence, a hypertrophied heart, while present writers contend that every disease of the heart attended with excessive action is aggravated. It was held for a century that digitalis, though not eminently useful, is still often of great service in dropsy dependent upon organic disease of the kidneys; but now we hear that in diseases of the kidney, attended with diminished diuresis, it is almost always useless, and always exceedingly dangerous.

Mumps as a Cause of Sudden Deafness.—Disease of the ear during the progress of acute infectious disorders is a not infrequent occurrence. Especially are suppurative inflammations of the middle ear common during the progress of scarlet fever, and non-suppurative inflammations are a frequent attendant upon the progress of measles. The nature and treatment of these ear diseases are well understood. But occasionally during the progress of mumps a sudden and complete loss of hearing occurs which is not so well known, either as to its nature or its treatment. A paper on the subject from the pen of Dr. Leartus Connor, of Detroit, which appears in the October number of *The American Journal of the Medical Sciences*, gives the following conclusions: 1, Parotitis in some rare cases produces complete deafness; 2, this deafness is usually attended with all the evidences of disease of the labyrinth; 3, these show that it sometimes begins in the cochlea, but more frequently in the semicircular canals; 4, owing to the lack of early observations and treatment it is impossible to say that it is not transmitted through the middle ear from the parotids to the labyrinth; 5, the history of some of the cases would seem to suggest that such an origin was possible; 6, this possibility renders it very important that every case of deafness during an attack of mumps be at once carefully examined, so as to settle the question; 7, this possibility offers the only hope for the successful treatment of these cases so as to prevent deafness. Thus, if there be a middle-ear disease, we might hope that revulsive and counter-irritant treatment would arrest the disease and save the labyrinth; 8, as to treatment of the labyrinthine disease nothing has thus far been devised that has produced any satisfactory result.

Grave Nervous Symptoms Occurring in Typhoid Fever.—Dr. Baas relates the case of a boy eight and a half years old, who was suffering from typhoid fever. At the twentieth day, when the fever was at its maximum, the child passed some bloody stools, and at the same time fell into a state of complete cerebral torpor. The patient gave no signs of consciousness, the pupils were contracted and responded very sluggishly to light, and there were several convulsive attacks limited to the right side of the face. The following day there was paralysis of the right facial nerve and of the arm on the same side. The fever began to subside at this time, consciousness slowly returned, and the paralysis disappeared. But with the return of consciousness the child was found to be aphasic and agraphic. He understood what was said to him, but was unable to find the words to reply. On attempting to write he could only trace some meaningless figures which he himself recognized as expressing nothing. For a few days he was unable even to indicate his desires by appropriate gestures. He could not count, but would point with his finger to the number which he was not able to articulate. Five weeks after the beginning of paralysis he began to speak, articulating first the vowels and later the consonants. One month later he had entirely recovered. These symptoms seemed referrible to lesions in the third frontal convolution on the left side, and in the motor centres of the cortex. The author believed that they were caused by a capillary apoplexy. —*Archives Générales de Médecine*, September, 1884.

The Varieties of Purpura.—The pathogenesis of purpura is as yet involved in considerable obscurity. In a recent study of the subject, Dr. Leloir (*Annales de Dermatologie et de Syphiligraphie*) recognizes three main groups of this affection: *A*. Purpura from modification of the vessels.—1. From perturbation of the capillary circulation, whatever its origin, leading to active or passive hyperæmia, producing hemorrhage by diapedesis or by vascular rupture. 2. *Purpura télangiectasique* of Cornil. 3. Purpura from primary alteration of the vascular walls, and consecutive rupture of these walls. *B*. Purpura from modifications of the blood.—1. Too great fluidity of the blood (purpura by diapedesis). 2. From vascular obstructions determined by certain elements contained in the blood leading to the formation of thromboses and embolisms. This purpura might occur from simple diapedesis; it is more often hemorrhagic infarction of the skin. *a*. From formation of clots in blood-dyscrasiæ. *b*. From embolism formed by white corpuscles (leucocythæmia, etc.). *c*. From embolisms formed by bacteria or micrococci (septic diseases, etc.). *d*. From embolisms formed by altered blood-elements. *C*. Purpura nervosa. In practice, however, many cases will not fall completely into either group; very often the origin seems to be complex. Alteration of the blood, troubles of the circulation, vascular lesions, disturbances of innervation, all causes of cutaneous hemorrhage, may coexist in the same subject. In all probability, even dyscrasic purpura may be in certain cases the origin of secondary vascular lesions, of secondary endarteritis. And it is probable that alteration of the blood often modifies the action of the vaso-motor nervous apparatus, central or peripheral. In studying a case of purpura, it must not be forgotten, then, that its pathogenesis may be complex. The relative importance of the different causes must be sought; and an attempt must be made to determine the relations between the determining primary or predisposing causes and the occasional or secondary causes.

Iodized Collodion in Erysipelas.—Dr. Humphreys, of Texas (*Nashville Journal of Medicine and Surgery*, September, 1884), has used for the past five years iodized collodion as a local application in erysipelas. He has had uniform success with it, even in quite obstinate cases. Constitutional treatment is, however, not neglected by him. The collodion is applied with a feather or camel's-hair brush, as often as desirable (?). Upon evaporation of the ether there is a feeling of coolness and ease, after days and nights of suffering. The following formula for making the iodized collodion is taken from *Walzl's Photographic Rays of Light*, January, 1878.

℞. Sulphuric ether ..... ℥ x.
Alcohol, absolute ..... ℥ x.
Gun cotton ..... ʒ ij.
Mix, and when dissolved add
Iodine ammonium ..... grs. 80.
Iodide cadmium ..... grs. 40.
Bromide cadmium ..... grs. 40.
Mix, and bottle tightly for use.

As the salts of cadmium may not be readily obtained in country drug stores, it is highly probable that two drachms iodide ammonium and two scruples bromide potassium or ammonium added to the first three articles would prove as efficient as the formula given above.

Atropine in Acute Otitis Media of Childhood.—Dr. Miot has obtained excellent results in earache of children from atropine. The children to whom he gave it were very subject to coryza, and the inflammation would usually pass from the nose to the fauces and middle ear. But when atropine was given at the very commencement of the rhinitis the children were spared the pain of the otitis. For a child he used a solution of sulphate of atropine, 1 milligramme to 80 grammes of water ($\frac{1}{80}$ grain to 20 drachms), the dose of which was a teaspoonful repeated from two to four times a day at intervals of two or three hours. For adults he prescribed a dose of double this strength. The treatment was continued usually for two or three days.—*Journal de Médecine et de Chirurgie Pratiques*, September, 1884.

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THE HISTORY AND PROPERTIES OF COCAINE.

WACKENRODER and Johnston expressed the belief, as long ago as 1853, that an active alkaloid existed in the leaves of erythroxylon coca. Gadeke first isolated it, but it was not till 1860 that Niemann (*Ann. Chem. Pharm.*, 114, 213) announced its physical properties and gave it the name of *cocaïn*. A little later Losson found in coca leaves another, apparently inert, volatile base, which he called hygrin (*Ann. Chem. Pharm.*, 133, 351). This latter chemist states that in the best leaves the amount of cocaine was at most one-fifth of one per cent., and in the poorer kinds as little as one-sixtieth of one per cent.

Cocaine crystallizes in large four to six-sided colorless prisms. It has a bitter taste, benumbing the tongue, a strongly alkaline reaction, and melts at 98° C. It dissolves in 704 parts of water at 12° C., easily in alcohol, and more easily in ether. Its composition, as determined by Losson, is $C_{17}H_{21}NO_4$.

Cocaine unites easily with dilute acids to form crystallizable salts, which are soluble in alcohol but not in ether.

The salts which the industry of chemists have already prepared are the muriate ($C_{17}H_{21}NO_4HCl$), the sulphate, nitrate, tannate, and oxalate. Besides these there have been prepared double salts of cocain-platinum chloride ($C_{17}H_{21}NO_4HClPtCl_2$) and of cocain-gold chloride.

By decomposition with strong acids a new base has been formed out of cocaine, which is called ecgonin.

A test given for watery solutions of muriate of cocaine is picric acid, which throws down yellowish precipitate.

The alkaloid cocaine has not been used medicinally to any great extent, but its physiological action has been studied by a number of observers.

For man the dose runs from one-sixth to two grains. Its lethal power is slight and its action is not cumulative (Husemann). Von Anrep found (*Archiv. ges. Physiol.*, 21, 38, 1880) that the cocaine could be taken daily for a long time without producing any notable disturbance, and he concluded that its action was not cumulative. Schroff, who in 1862 made the first experiments upon man with cocaine (*Zeitschrift f. Wien. Aerzte*, 30–34), found that in large doses it caused vertigo, lassitude, slight deafness, disturbance of memory, and of co-ordination of thought.

Other experiments and observations by Froumüller (*Prag. Vierteljahrsschr.*, 179, 109, 1863), Jarchanoff ("Cocain and Diabetes, Petersburg, 1872), and Ploss (*Zeitschr. Chir.*, 222, 1863), appear to show that cocaine is a narcotic, having a primary stimulating action upon the brain, and being analogous in properties to cannabis indica. Froumüller, in fourteen cases, was able to produce sleep by giving large doses (up to five grains). Ploss reports the case of a druggist who took about twenty-two grains of cocaine in a glass of beer. He slept quietly for some hours, then awoke with powerful abdominal gripings, burning and dryness of the mouth, and thirst. He vomited any liquid drank. He suffered from vertigo, feebleness, and aneuria for twenty-four hours. The heart's action showed no disturbance, and his mind was not disordered. The case is instructive as showing that cocaine is probably not a very poisonous drug to men, and that in large doses its narcotic action is immediate.

Among animals it has been found that frogs are more susceptible than warm-blooded animals, and that carnivora are more sensitive than herbivora.

The fatal dose for a dog is from three to five grains (Danini: "Ueber Physiolog. Wirkung und Therap. Anwendung des Cocains," St. Petersburg, 1873). Rabbits are killed by doses of 0.1 gramme per kilogramme of animal, according to Von Anrep.

The physiological effects of cocaine externally and internally have been studied by the authors already quoted, and by Nikolsky ("Beitrag. zur Cocaïn Wirkung auf den Thier Organismus," St. Petersburg, 1872); Isaac Ott (Moréno y Mäiz: "Recherches Chim. et Physiol. sur l'Erythroxylon Coca du Pérou et la Cocaïne," Paris, 1868); by Danini ("Ueber Physiol. Wirkung u. ther. Anwendung des Cocaïns," Charkow, 1873); Bennett ("Report on Antagonism of Drugs," 1875); and by Rossbach ("R. and Nothnagel's Handbook of Therapeutics"). An excellent review of the contributions of these authors, to which we are indebted, is given in Husemann and Hilger's "Die Pflanzenstoffe," Berlin, 1883, from which we summarize the knowledge so far gained of the properties of the drug.

Locally, it produces the effects upon skin and mucous membrane which have been already described in THE RECORD, and need not be repeated now. Moréno, in 1868, showed that local injections abolished reflex movements for a time, and Von Anrep, in 1880, showed that the sensibility of the skin was abolished *when hypodermically injected*, and that of the tongue when touched with strong solutions. The same author applied a solution containing one-half a milligramme to the conjunctiva, and found that it caused a temporary dilatation of the pupil, which was increased by adding atropine. Strangely enough, Anrep did not note that the conjunctiva was insensible, or if so, did not appreciate the practical significance of the fact. As Nikolsky found that the pupil is still dilated by cocaine after section of the sympathetic, it is inferred that the drug does not act upon the iris through that nerve.

Cocaine given internally in small doses to warm-blooded animals stimulates the nerve-centres, acting most plainly upon the higher psycho-motor cells of the brain, then upon the medulla oblongata and the cord. It seems especially to affect the action of the semicircu-

lar canals, causing vertigo, and in dogs, at least, disturbances of equilibrium and rolling movements. The pupil is dilated. A lengthening in the time of muscular contraction, claimed to exist by Ott, Buchheim, and others, is denied by Nikolsky and Anrep. Respiration is hastened and labored in warm-blooded animals; in fatal doses the breathing stops before the heart-action. Upon the heart moderate doses of cocaine in warm-blooded animals lessen the inhibitory action of the vagus and increase the rapidity of the beat without impairing its strength. Moderate doses appear also to raise arterial pressure, but in medicinal doses the cocaine does not greatly affect the vaso-motor system. Moderate doses increase intestinal peristalsis, while large doses lessen it and seem to produce a venous congestion of the walls.

There is a decrease in the secretion of saliva and of mucus, while the urine does not seem to be much affected, except in toxic doses.

So far as the local anæsthetic effect of cocaine is concerned, it seems to have been independently noticed by several persons, as we have indicated above. The practical application of this knowledge, however, is only of very recent date.

THE TENEMENT-HOUSE CIGAR BILL AND THE FACTORY NUISANCE.

THERE have been two recent decisions on health questions which deserve attention. The first of these is the judgment of the General Term of the New York Supreme Court, holding that the Tenement-house Cigar bill is unconstitutional. This law was passed at the last session of the Legislature and took effect immediately. By its provisions it prohibited the manufacture of cigars in all tenement-houses occupied as the home or residence of more than three families living independently of one another and doing their cooking on the premises. Two days after the passage of the act, Peter J——, who occupied seven rooms on the first floor of a tenement-house and manufactured cigars in one of them, was arrested for breaking the law. He was unable to procure bail and was committed to prison. A writ of habeas corpus was then sued out in his behalf, but was dismissed, and an appeal from this decision has been up for review at the General Term of the Supreme Court, where it was reversed and the law declared unconstitutional. The grounds for this decision are that the labor of the poor man is his only property and as much entitled to protection as any of its accumulations; that this law suddenly deprived him of the free use of this labor, and in effect seized private property without just compensation. Such a result is against the Constitution of the State, and any law which allows it must be unconstitutional. The opinion goes on further to say that the ostensible object of the bill, viz., to secure better health, as declared in the title of the bill, is a mere pretence, and that the real object is to "suppress and restrain such manufacture in the cases covered by the act, for the purpose of preventing successful competition, injurious to other modes of manufacturing the same article."

The judges find reasons for this belief in the very face of the bill, and they certainly make out a strong case. They say that tenement-houses where the cooking is not done on the premises are exempted, and that the most thronged and over-crowded tenements, which are occupied largely by persons who live from hand to mouth and by beggary, can manufacture cigars without interference. Also the first floor of the tenement-house is excepted if in addition to the manufacture of cigars there be a store for their sale, while if health were the object this floor, being the resort of more persons than the others, would certainly be under the provisions of the bill. The law fails to secure health to any reasonable extent, but in the words of the judges it accomplishes a very different thing: "If the act were general and aimed at all tenement-houses, and prohibited for sanitary reasons the manufacture of cigars and tobacco in all such buildings, or if it prohibited such manufacture in the living rooms of all tenants, another case would be presented. But in the form in which it comes before us it is so unjust in its inequalities, so harsh and oppressive upon the labor of poverty, so keenly discriminative in favor of the stronger classes engaged in the same occupation, that it certainly ought not to have been enacted."

It is said that the large manufacturers were confidently expecting that the constitutionality of the bill would be upheld, and have been perfecting machines which would do away very largely with hand labor. If these machines should really be set at work the result will be deplorable, as the workmen would be in the position of having the opportunity for work given them again but the work all taken away from them. The decision of the General Term may be appealed from, and if so the matter cannot be considered as settled.

The second case referred to was one in the New Jersey Court of Chancery, where an application was made by the Board of Health of Lambertville for an injunction preventing the proprietor of a tomato-canning establishment from turning the refuse from his works into a creek, it being alleged that the odor of the decaying vegetable matter was injurious to the public health. The case was bitterly contested, and, as is usual in such cases, the expert evidence presented was, much of it, absolutely contradictory. It was claimed on behalf of the defendant that the smells were not harmful, and also that others were responsible for the unhealthy condition of the town. The Vice-Chancellor, in deciding the case, held that the defendant's factory was the primary source of the nuisance, and that this made him responsible, even though the bad condition of the sewer and the discharges of filth by other persons might have contributed to the nuisance; and a decree was made forbidding any further deposit of the decaying vegetable matter.

There are a number of similar cases depending upon this decision, which is an important one as tending to strengthen the powers of boards of health.

ACUTE PAINFUL PARAPLEGIA.

UNDER the name of "acute painful paraplegia" M. Dumolard describes an affection which closely simulates an attack of rheumatism. The pains suffered by the patients are often intolerable, and the paralytic symptoms, which they rarely mention, may pass unperceived. The affection is then characterized by the following phenomena: paralytic symptoms feebly manifested, but with very intense pains; on this account Dumolard calls it "acute painful paraplegia."

This designation, however, is insufficient, as it says nothing of the seat and nature of the malady. It is characterized, at the beginning, by sharp pains in the regions of the kidneys and in the lower limbs, soon followed by incomplete paralysis of the abdominal members and of the bladder, with hyperexcitation of the reflex acts of the lumbar portion of the cord. In some cases the pains leave the lower limbs and attack the upper part of the trunk and the upper limbs, thus causing a very painful though incomplete cervical paralysis. Though lasting for a considerable time, the affection seems to tend always toward a cure; but its course is not always simple and regular.

As the disease is somewhat rare, and as nothing is known of its nature or anatomical situation of the pathological disturbances caused by it, it may be interesting to give a short *résumé* of the symptoms presented in the cases reported by Dr. Dumolard. The affection commences, as has already been stated, with acute pains in the kidneys and lower limbs. Both limbs are affected, and the pains extend to the feet. At times they are very severe, and are accompanied by muscular contractions and cramps of the thighs and legs. They sometimes come on without appreciable cause, while at other times they are produced by attempts at movement, by a shock, or even by a slight touch. The reflex power of the cord is evidently in a state of hyperexcitation. The patients seem to be fully aware that the pains are not the sole cause of the loss of the power of motion. The pains gradually increase, extend to the bladder, and micturition becomes painful. These cases were at first diagnosticated by Dumolard as rheumatism, for which he prescribed salicylate of soda, with the view that the meninges were affected, but without result. In a variable time, three to six weeks, the condition begins to improve, and the affection seems to pass off spontaneously. In other cases the pains begin in the shoulder and extend to the wrist. In these cases the bladder may not be affected.

We have now briefly analyzed the principal symptoms of this curious affection. It commences with a lumbar pain, with a sensation of weight in, and radiation into, the back. It may be at first very acute and then gradually diminish in intensity; at other times it is slight in the beginning, and becomes more and more violent. It first commences just below the kidneys, then attacks the dorsal region and ascends toward the neck. The pains in the legs do not always follow the course of the sciatic nerve, nor are they localized in the joints, as in articular rheumatism, but are seated, as a rule, along the entire surface of the affected limb. Whatever may be the manner in which the affection commences, the patient soon becomes completely paralyzed in the painful regions, while the pains still continue. The reflex power of the cord is then slightly exaggerated, and the least shock to the feet, or the least movement of the affected parts, is sufficient to cause the painful tetanic contractions. Is it not possible that this exaltation of spinal reflex may explain, in certain cases, the sort of muscular impotence which prevents movements on the part of the patient, rendering him incapable of taking a step, while in the horizontal position their muscles appear to be very strong? Will not this also explain the difficulty of micturition, by supposing that the exaggeration of the reflexes causes a contraction of the neck of the bladder?

The general state in this affection is never grave; the pulse rarely goes above 80; the skin is moist; the tongue, though white, remains moist, and the general aspect of the patient is indicative only of pain. The bladder is generally affected, and the patient makes futile attempts to completely evacuate it. The paralysis of the bladder and limbs is never complete, however. As a rule, the pains are confined to the region of the kidneys and to the lower limbs during the whole time; they may, however, as stated before, suddenly leave these regions and attack the arms and upper part of the body, and give rise to symptoms of painful and incomplete paralysis of the cervical region. The pains do not follow the nerve-trunks, nor are they localized in the vicinity of the trunks; the entire surface of the limb is affected. Nor are there any lancinating pains, such as are seen in cases of neuralgia.

The cause of the affection is obscure. All of the patients seen by Dumolard were in middle life and of the working class. Most of them referred their attack to exposure to cold or wet. It is noticeable that in six cases out of seven the patients were attacked in February or March. Furthermore, all of the patients were males. The treatment is necessarily symptomatic; energetic revulsants over the region of the cord should be used perseveringly; the saline purgatives are indicated for the saburral state of the digestive tract; bromide of potassium, as a moderator of the spinal reflexes, is also indicated. Chloral and morphine are indispensable for reducing the hyperæsthesia of the limbs and for the insomnia. It would seem that the electric current would be useful in the paralyzed condition of the limbs.

An affection almost precisely similar to this in every respect was described by Bockhammer some years ago, and an analysis of his paper may be found in the *Revue des Sciences Médicales*, vol. viii., p. 183. It appeared as an epidemic in Spain under the name of the Azannon disease, from the village where it appeared for the first time. The description of it given by Bockhammer corresponds in almost every detail with that of Dumolard.

Can it be that this is an abnormally mild form of spinal meningitis? Or may it not be due to lead-poison? It is scarcely probable that it is a manifestation of syphilis. Certainly its etiology is very obscure, nor is it likely to be cleared up, seeing that the patients all recover.

THE NEW PENAL CODE AND THE RHINELANDER CASE.

In our issue of September 20th we gave the main facts regarding the Rhinelander case, which for many reasons has excited unusual interest in the community. The defendant, Mr. William C. Rhinelander, committed a homicidal assault upon Mr. John Drake, whom he believed to be alienating the affections of his (Rhinelander's) wife. Being brought to trial, the prisoner's relations claimed that he was insane, while he himself denied this and contended that he should be brought to a criminal trial for his act.

The position thus taken by the prisoner was unique. But besides this, the trial involved the application for the first time of the sections in the new Code providing for

the trial of persons who put in a plea of insanity as an excuse for crime. The law says that if any person under indictment for the crime of murder or attempt at murder shall appear to be insane, the Court of Oyer and Terminer may, with the concurrence of the presiding judge, inquire into the sanity of such person, and may for that purpose appoint a commission to inquire into the facts of the case and report to the court. Such a commission was appointed by Recorder Smyth, which consisted of Dr. William Detmold, Mr. Patrick Nolan, and Mr. Edward Paterson. A large amount of evidence was taken. A report was finally made to the Court, in which two of the commissioners, Dr. Detmold and Mr. Nolan, stated the opinion that the prisoner was insane, while Mr. Paterson gave a contrary opinion.

Recorder Smyth has recently, after reviewing the evidence furnished by the commission, reversed its decision and decided that the defendant is sane. In doing this he establishes the precedent that a judge may reverse the decision of the commission he appoints. The case, besides furnishing a precedent on the above point, is instructive in that it shows how valueless expert testimony may still be, even under the new law. This law, in fact, though it gives some additional guarantee that the sanity of a prisoner is submitted to a careful test, does not in the least improve upon the mode of getting expert opinion. In the present case the weight of scientific opinion was almost entirely on the side of Rhinelander's insanity. In fact, we do not recall a single name among the experts put up by Rhinelander's counsel which would carry weight in the profession. As long as lawyers can set up any doctor, however unqualified as an expert, we must expect the present state of affairs to continue. It is as ridiculous to assume that every medical man, even if he has had a little special experience, is an expert on insanity as to suppose that every general practitioner is an ophthalmologist or a dermatologist.

DEAD TEETH IN THE JAWS.

It would be well if the dead (pulpless) teeth filled and left in the jaws of people were labelled "at the owner's risk," and all golden "crowns" and "bridge" structures attached to dead teeth marked "extra hazardous;" for it appears that when the pulp of a tooth has been removed life no longer exists in the dentine, which derives its nourishment from the pulp, and there is no way of preventing the dead matter left in its canaliculi from undergoing decay for an indefinite period of time. This matter has been touched on by our correspondent in another column, and we believe that the attention of the general practitioner is now being directed to this subject more than heretofore. It would seem that dentistry has perhaps been over-zealous in its efforts to retain defective teeth in the mouth, or to supplant them with apparatus which often proves to be anything else than harmless to the patient. In carrying both of these branches of dentistry to what the medical mind regards as a dangerous extreme, the health of the patient has too often been lost sight of. This, after all, naturally enough, was to be expected so long as medical men relegated the management of nearly all diseases of the mouth, such as the removal of dead teeth, the treatment of alveolar abscesses, diseases of the antrum of Highmore, and facial neuralgias, to dentists who possessed very little if any knowledge of medicine. It is in consequence of this course that the treatment of jaw diseases has been lost sight of by the general surgeon, and we fear that the well-intended efforts of dental schools to impart surgical knowledge to the mere mechanics who constitute by far the greater number of their students, will not remedy this neglected feature in medical education.

Dentists having a predilection for surgery of the jaws would do well to recognize this state of things, and to bear in mind that a medical education and training are necessary accomplishments to acquire before the study and treatment of any region of the body may be successfully taken up. In this way only may the aspirant establish himself in any medical specialty, so as to gain the confidence of the profession. At the present time it is believed that not over five per cent. of dental graduates, not to mention others who practise dentistry, have taken the degree of M.D., and of these a very small number have had any training in the practice of medicine.

The practitioner, in the meantime, who neglects to inquire into the state of his patient's teeth, may encounter much difficulty in overcoming diseases, especially those about the head, which can in any way be affected by reflex nervous influences from this source; and when the question of the removal of a dead tooth which gives rise to disturbance is considered, it should not be forgotten that local pain may be entirely unobserved by the patient.

News of the Week.

Dr. David B. Miller, of this city, died on November 1st, of Bright's disease. He was born in 1836, and graduated at the College of Physicians and Surgeons in 1858.

Dr. Paul Grawitz, of Berlin, assistant at the Pathological Institute, under Virchow, has been appointed to the charge of the Carnegie Laboratory, Bellevue Hospital Medical College. Dr. Grawitz has made a number of very scientific pathological researches, and is eminently qualified by training to fill successfully the position to which he is chosen. The faculty of the college are showing a desire to make the Carnegie Laboratory an institution of positive practical and scientific value not only to their students but to the profession of the city.

Our Medical Centenarian.—*Harper's Weekly* publishes an excellent portrait of Dr. Christopher Columbus Graham, of Louisville, Kentucky, who recently arrived at the age of one hundred years. His fellow-citizens celebrated the occasion by tendering him a banquet.

A Doctor's Heroism.—Under this title the *London Spectator* gives an account of a Dr. Samuel Rabbeth, of London, who sucked the diphtheritic membrane out of a trachea tube to prevent the suffocation of his patient. He caught the diphtheria himself and died.

Another French Cholera Commission.—Professor Jules Aronssohn has been appointed by the French Government as head of the commission to study the cholera in Italy.

The Latest Estimate of the Deaths from Cholera is as follows: France, 6,741; Corsica (estimated), 100; Algiers (estimated), 200; Italy, 12,283; Spain, 436. Grand total, 19,760. The above represents a period of from June 14, 1884, when the first case occurred at Toulon, to October 15th. There were probably about 50,000 cases of the disease.

Bequest to Indigent Medical Students.—The late Countess Bose, of Kassel, has left to the University of Berlin, 780,000 marks as a fund for the use of indigent medical students.

Professor Du Bois Reymond Challenged by a Quack.—*Ex gratia* Bismarck, Professor Schweininger has challenged Professor Du Bois Reymond to fight a duel, Schweininger having taken offence at the remarks of Reymond on his appointment to a chair in Berlin University. Professor Reymond declines to fight.

Two Decisions Regarding the Pay of Expert Witnesses.—Judge White, of Pennsylvania, has decided that under the law a physician must answer a summons from a court to appear and testify as an expert without remuneration.

A directly contrary opinion to Judge White's was recently delivered in the Circuit Court of Chicago. A dispensary patient sued Dr. Hotz and his substitute, Dr. Lee, for the loss of an eye, claiming $10,000. Another physician was summoned to testify as to facts in the case. Being then asked to testify as an expert and give an opinion, he refused.

"This action of the court," says the *Weekly Review*, "is of considerable importance, as it shows that a physician cannot be made liable for any act of his *locum tenens* when duly qualified by law, and further that no physician is obliged when subpœnaed as a witness of fact to express an opinion as an expert."

The Oldest Living Microcephalic.—At a recent sitting of the Berlin Medical Society, Professor Virchow exhibited a girl, aged fourteen, with a slight though normally developed figure, but with a diminutive head, scarcely as large as a man's fist. She came from Offenbach, and was introduced by her mother, a tall, large-boned woman. Her face is not larger than that of a new-born child, with a sharply projecting nose and prominent jaws; her complexion is delicate, and her features resemble those of a bird of prey. The size of the brain in this diminutive skull is proportionately small, and the intellectual powers are not developed beyond those of a six-months child. The only word, besides some inarticulate sounds, that the girl can pronounce is mamma. The parents had had seven children, of whom four were microcephalic, but only the one exhibited had lived. When she was at home she sat quietly, and preferred avoiding the society of other children, generally withdrawing into a corner of the room. She ate and drank purely mechanically. Virchow referred to this case as the oldest one living. At the recent meeting of the French Association for the Advancement of Science, Dr. Magitôt reported the case of a microcephalic woman, aged thirty, weight seventy pounds. She showed more intelligence than Virchow's case, and could dress, take care of herself, and speak several words.

The Board of Health of this city receives this year an appropriation of $420,282. It wanted $17,000 more.

American Use of the Thermometer in Disease in 1808.—In Dr. Elisha North's "Treatise on Malignant Epidemic Spotted Fever, or Cerebro-Spinal Fever," he tells us, page 41, that it will always be well to ascertain the degree of the patient's heat by a thermometer.

Medical Department University of Vermont.—Dr. W. Oliver Moore has been appointed Professor of Diseases of Eye and Ear, in place of Dr. D. B. St. John Roosa, who has resigned, and Dr. Stephen S. Burt has accepted the chair of Professor of Physical Diagnosis.

Pacini's "Cholera Germ."—It has been stated that Professor Pacini, of Naples, announced the discovery of a cholera-microbe as early as 1855. A claim of priority over Koch has been put in, to which, however, we at the time denied validity. Dr. A. Bianchi, of Florence, has just collected and published Pacini's works upon this subject, from which it appears, as we anticipated, that the particular microbe found by the Italian professor differs entirely from that of Koch. It is a vibrio found in the intestine, and which by its growth produces irritation.

M. Ricord on the Cholera.—At a recent meeting of the Paris Académie de Médecine the venerable Ricord made some remarks upon the cholera. He believed that it was not contagious, and that it originated *de novo*, and was not always imported. Ricord's experience was during the epidemic of 1832. His views are in accord with those of Jules Guérin.

Statistics of Cholera in Italy.—Considering the brevity of its duration, according to *La Gazzetta degli Ospitali* (*Lancet*), the present epidemic of cholera in Naples has exceeded in severity all previous invasions, including the terrible one of 1837. That was the cause of 13,800 deaths in five months. The first death from cholera in Naples this year occurred on August 21st. From that day to midnight, September 30th, the cases numbered 10,957, and 5,778 deaths. In the hospitals the recoveries were 1,121, the deaths 787. The actual population of Naples is 500,000. At Torre Annunziata 137 deaths occurred in 234 cases. From the 1st to the 30th of September 294 soldiers of the Naples garrison were attacked with cholera, 134 of them fatally. The mean mortality was 42 per cent. In the aristocratic quarter of Chiaja, during the whole of September, 162 deaths occurred among 252 cases of cholera. By far the greatest number of victims were women.

Death from Cholera of a Distinguished Italian Physician.—We chronicle with regret the news of the death of Professor Luigi Somma, of Naples, the founder and director of the recently established periodical devoted to the study of diseases of children, and entitled *Archivio di Patologia Infantile*. A victim to cholera, the scourge which has so devastated the beautiful city in which he lived and labored, he fell at the post of duty and of honor, on September 19th last.

Another Doctor's Novel.—A well-known London physician has just published a novel called "Gaythorne Hall." It is well spoken of.

Klein's "Bacillus Dinner."—The report that Dr. E. Klein swallowed a dose of cholera bacilli is laughed at in Berlin circles among the supporters of Koch. It was a sensational performance, they assert, and proves nothing, except that a suitable nidus is necessary for the bacilli to develop in—which Klein did not have.

Dr. James C. Carson of the Institution for the Deaf and Dumb in this city has, says the New York *Medical Journal*, been appointed Superintendent of the State Idiot Asylum at Syracuse.

Two Faculties and One College.—The style of two medical colleges and one faculty is not new, and used to be served up at Louisville, Ky., with considerable financial success. To have two faculties and one college, however, is rather novel. Says the *Maryland Medical Journal:* "The dissensions between the two factions claiming to be the Baltimore Medical College have been freely ventilated by the secular press of this city. The state of the controversy has not changed, and the claims to the right of title and property of the college will have to be decided by the courts. Two Faculties, having separate buildings, are instructing students under the charter of the Baltimore Medical College. This is a unique controversy, and its results will be watched with interest. So far as we can judge, the Monroe faction seems to have the advantage up to the present time."

The Charity Organization Society and the Medical Charities.—The Second Annual Report of the New York Charity Organization Society states that it now has one hundred and eighty-three charitable societies co-operating with it. Among these there are only seven medical charities, viz.: Home for Convalescents, House of Rest for Consumptives, New York Hospital, New York Infirmary for Women and Children, Northern Dispensary, Woman's Hospital, Columbian Institute. It is evident that as yet there is very little medical "charity organization" despite all that has been said.

The Courage of Physicians.—*The British Medical Journal*, under date of September 17th, states that three professors and five physicians had been attacked with cholera during the discharge of their duties at Naples.

The *Medical and Surgical Reporter* gives currency to a statement that a young Pole, living in Warsaw, has offered himself in the interest of science to be experimented upon in reference to the cholera. "I am unmarried," he says, "I have no ties of any kind, and no plans for the future." His offer had better be taken.

The Peculiar Progress of the Italian Cholera Epidemic.—A *Lancet* correspondent writes that there are certain phenomena peculiar to this outbreak of cholera in Southern Europe which should form the theme of careful official inquiry. After the outburst of the malady in Toulon its direction was much less northward than southward. Again, both in Italy and France it visited great seaports most heavily, while in Italy this curious spectacle was witnessed—it selected alternate seaports for attack. For example, it overleaped the populous and not over-cleanly Genoa, and alighted heavily on the less populous and not more insanitary Spezia. Again, it overleaped the less populous and decidedly insanitary Leghorn, and exploded with fearful violence in the more populous, though not very much more insanitary, Naples. What was its principle of selection? How is it that Messina and Palermo, seaports so severely scourged by it in former visitations, escaped so cheaply on this occasion? And how is it that the great provincial capitals—Turin, Milan, Venice, Florence, and Rome herself, all of them the scenes of virulent outbreaks on previous occasions—have hardly had one case?

Cholera and Cleanliness in Naples.—A correspondent of *The Lancet* writes that the mode in which the cholera attacked the people of Naples has been very perplexing to the hygienists. For example, the narrow, ill-ventilated streets intersecting blocks of buildings in which the population teems like rabbits have been precisely those in which cholera has numbered least victims; while the dwellings which, from their amplitude and situation, the freely aired thoroughfares dividing them, are in marked contrast to the preceding, have contributed the heaviest contingent to the hospital and the cemetery. Again, the ill-fed, badly clothed, unwashed inmates of the rookeries have come off very lightly in comparison with the well-dieted, comfortably clothed, not uncleanly bourgeoisie. "Partly because by nature," says the correspondent of the *Opinione*, whose letters from Naples have given the best account of the epidemic, "we have something of the Arab, partly because the facts above stated reinforce the sentiment of fatalism which is at the bottom of our southern character, our populace laughs to scorn all the admonitions of the authorities and devours figs, capsicums, tomatoes, more or less unripe, does everything in fact which it has means to indulge in, though forbidden by the profession. As to soup-kitchens, it will have none of them. 'They,' it says, 'are for the sick, and we are quite well.'" All this, however, should not shake our faith in the efficacy of pure water and cleanly dwellings.

A Floating Hospital.—Chicago has followed the example of New York, and last summer established a floating hospital, upon which twenty-one thousand four hundred and eighty-nine persons were cared for and treated.

A Novel Introductory.—The custom of giving formal introductory addresses is growing less popular in England, owing, it is said, to the too boisterous way in which they are received by the students. The opening ceremony in connection with the London Medical School this year took an unusual form, which possessed the merits of originality, interest, and usefulness. The customary presentation of prizes was made, and short addresses were delivered. On the conclusion of these formal proceedings, the field at the back of the hospital became the scene of further operations, and being limelighted, was seen to be transformed into a battle-field strewn with the dead and dying remnants of a defeated army. To these entered an ambulance corps, the members of which immediately set about the stern business of caring for the injured militants; and realism was still further obtained by the introduction of a number of ladies in the red cross uniform.

Reviews and Notices.

Hooper's Physician's Vade Mecum: A Manual of the Principles and Practice of Physic; with an Outline of General Pathology, Therapeutics, and Hygiene. Tenth Edition. Revised by William Augustus Guy, M.B. Cantab., F.R.S., Fellow of the Royal College of Physicians; Late Professor of Forensic Medicine and Hygiene, King's College, London; Consulting Physician to King's College Hospital, etc., etc., and John Harley, M.D. Lond., F.L.S., Fellow of the Royal College of Physicians; Honorary Fellow of King's College, and Late Physician to the London Fever Hospital; Lecturer on General Anatomy and Physiology at, and Physician to St. Thomas' Hospital. Volume II. New York: William Wood & Co. 1884.

The second volume of Hooper's Manual appears as the monthly number of Wood's Library, following immediately in order the first volume. It contains the greater portion of the practical part of the work, the first volume having been devoted chiefly to an outline of general pathology, therapeutics, and hygiene. At the end of the book there are tables of remedies and formulæ, a glossarial index, and a general index. As to the value of this work, we can only repeat what was said in noticing the first volume. It is one of the best manuals of practical medicine in existence, complete enough to serve as a guide in the treatment of disease, and yet so compact as to allow of ready reference by the practitioner, to whom time is of value.

Corpulence and its Treatment on Physiological Principles. By Dr. Wilhelm Ebstein. Translated from the Sixth German Edition by Prof. A. H. Keane. Wiesbaden: J. F. Bergmann. New York: B. Westermann & Co. 1884.

We have already reviewed a so-called "popular" edition of this book. We have nothing to add concerning it now, except to recommend it as a most suggestive and useful monograph. The present edition is complete and is well printed.

The Principles of Ventilation and Heating and their Practical Application. By John S. Billings, M.D., LL.D. Pp. 214. New York: The Sanitary Engineer. 1884.

Originally written as a series of papers contributed to the *Sanitary Engineer*, the material composing this work has been rearranged and amplified into a quite complete and most readable book. The author has entered into his task with an evident desire to supply to the medical profession, as well as to the interested in sanitary matters in general, much-needed information on a highly important subject, and to do so in a manner both rational and practical. In this rather difficult undertaking he has succeeded most admirably. He first shows the impossibility of accomplishing anything in the way of ventilation without some knowledge, at least, of the principles of physics as affecting the relations of gases; then explains these principles as briefly and clearly as could be desired; and finally details their application to private dwellings, churches, theatres, and hospitals. He maintains, as is self-evident, the intimate connection between heating and air-supply, and shows the absurdity of attending only to the one to the neglect of the other. He then considers the different methods of heating, as applied to the various kinds of buildings, always with a view to securing the necessary and proper purity of the air. The text is elucidated by drawings, particularly of plans of some of the more recent and improved structures, explaining their merits and defects. In short, the book is one that every physician should make himself familiar with. The questions of hygiene, with a view to preventive medicine, are constantly assuming greater importance; and among them that of sanitary warming and ventilation is by no means of secondary importance, and one with which the medical man must familiarize himself. Dr. Billings' book will tell him just what he wants to know. The author is one of a class of whom we have unfortunately too few in this country; men who are in a position and who have the ability and inclination to apply themselves to the scientific studies of the profession, without having constantly in their minds the question whether the result can be utilized in their practice so as to bring in returns in dollars and cents. This contributes in no small degree to that judicial fairness of mind which is requisite in writing to instruct; and as a result this book of Dr. Billings is noticeably free from bias or prejudice, while the clear and forcible style makes the work interesting as well as instructive. Considering the value of the book, it was deserving of better treatment at the hands of the publishers; the type, though clear, is small and very trying to the eyes. If the book had comprised another hundred pages, the increase in price would have been more than compensated for by the ease in reading.

A Treatise on Physiology and Hygiene for Educational Institutions and General Readers. By Joseph C. Hutchison, M.D., LL.D., ex-President of New York Pathological Society, etc. New York: Clark & Maynard. 1884.

In the revised edition of this admirable little work, considerable material has been added on the influence of alcohol and narcotics on health. Both of these are treated in a common sense manner. Some alterations are made throughout the text, which help to enhance the value of the book for beginners.

Manual of Chemistry: A Guide to Lectures and Laboratory Work for Beginners in Chemistry; A Textbook specially Adapted for Students of Pharmacy and Medicine. By W. Simon, Ph.D., M.D., Professor of Chemistry and Toxicology in the College of Physicians and Surgeons, Baltimore, Md. 8vo, pp. 411. Philadelphia: H. C. Lea's Son & Co. 1884.

This is a book for careful study rather than for the casual reading, either of the beginner or the advanced student. The mastery of its various lessons means work from beginning to end. It is impossible for any author of a treatise on chemistry to give his subject the attractiveness of a novel, and Professor Simon in this instance has certainly made no such attempt. He does his duty when he presents his subjects in all their nakedness of fact and sternness of chemical logic. This is done from beginning to end in an almost painfully terse manner. The work is divided into seven principal parts, which are naturally and simply arranged. The discussion of the fundamental properties of matter prepares the student for a proper appreciation of general chemical phenomena, next follows the consideration of the principles of chemistry, of the non-metallic and metallic elements, the old classification being in the main adhered to; next comes qualitative analysis, organic chemistry, and physiological chemistry. It will thus be seen that the general subject of the book is quite thoroughly treated, giving the student a comprehensive view, and preparing him for most thorough work in his department. It contains many beautifully colored plates of chemical reactions, which are in some instances made with the actual substance when possessing stability of color, and in others most artistically and beautifully tinted by the talented wife of the author.

Inula Campana in the Treatment of Leucorrhœa.—Dr Chéron mentions several substances which he states exert a beneficial influence in leucorrhœa. Among these the most efficacious, he thinks, is elecampane. It is given in infusion, tincture, extract, or powder of the root. The best preparation is an infusion of three drachms of the root in five ounces of boiling water, the whole to be taken in the morning.—*Rivista Clinica*, No. 8, 1884.

Correspondence.

"DEAD TEETH IN THE JAWS."

To the Editor of The Medical Record.

Sir: It appears that the allusions to "pain in the ears due to irritation in the jaws," etc., under "Hospital Reports," and my comments thereon in The Record of October 4th, have called forth dissenting views in the two subsequent issues.

Lest silence might be construed as yielding assent to your correspondents' views, I would beg space to reply briefly to some of their strictures. Before so doing, however, it might be well to state that the cases reported by my senior assistant, Dr. Bartlett, as coming to the ear clinic, were not intended to specially illustrate dental affections; but it was believed that such examples of reflected dental irritation would not be devoid of interest to the profession. The extraction and filling of the teeth, where required, it may be said, is intrusted to our own dentists, who are competent to do such work.

In regard to the exceptions taken to the concluding paragraph of the report, I cannot think that, from a clinical point of view, the statements were either too sweeping or overdrawn. Thus the retention in the jaws of teeth which are diseased from death of the pulp or from caries have become irremediably sensitive to thermal influences, or have been deprived of adequate periosteal nourishment through calcareous formations about the roots, very frequently gives rise to nervous diseases about the head. I am convinced that these reflected nerve influences manifest themselves much oftener since dentistry has come more extensively into practice during the present generation, and greater efforts are made to retain defective teeth in the jaws; and, moreover, the very general introduction of apparatus for retention in the mouth of substitutes for absent teeth is apparently accomplishing much harm also. Nor does the energy displayed in increasing this industry not give promise of speedy reform. I am not sure that the injurious results alluded to are always due to the work of less informed operators, as has been alleged, since it has been my lot to have frequently seen morbid processes kept up in the ears for a long time by diseased teeth which dentists of repute were "treating," and speedy recovery has followed the tooth's removal. Indeed, while writing this letter a well-known medical man who practises dentistry in this city came to consult me about an inflammation of one of his ears, which began to trouble him from the time the upper second molar of that side was "treated" for a diseased pulp, and he himself is convinced that the offending tooth lies at the bottom of the difficulty.

The gist of the whole matter, however, seems to lie in the question, *Whether it is safe practice to retain dead teeth in the jaws.* Teeth seem unlike other parts of the osseous framework, inasmuch as they are developed from without, so to speak, and are afterward left constantly exposed to atmospheric, chemical, and mechanical influences liable to set up destructive processes in this substance. When limited caries results, its progress may be interfered with for a longer or shorter period of time by stopping the cavity, but when the nutrition of so large an area of the bone is interfered with, as occurs from death of the pulp, it would seem that in a large number of instances irritation cannot be so easily controlled, and the affected tooth becomes more or less of a foreign body, since the moment the pulp dies, thus *cutting off the source of nutrition from the dentine*, the part thus nourished must of necessity die also. In fact the tooth, having a vascular or nervous supply from both periosteum and pulp, the impairment of either must affect it.

From a review of this subject we were further led to believe that in the case of no dead (pulpless) tooth, however carefully treated and filled, can it ever be successfully demonstrated that a slight irritation is not constantly present, although no appreciable irritation may be experienced by the patient.

In regard to the treatment of pulpless teeth, the practice in vogue seems the reverse of procedures founded on well-established surgical principles, since stopping the natural outlet for the escape of putrescent products from portions of the pulp left remaining in the canal and in the dental canaliculi through the exterior part of the tooth itself, makes their passage into the tissues underneath unavoidable. This diversion of the drainage must be of questionable propriety in many instances, since the tissues about the roots of dead teeth are liable to become infiltrated with the products of decomposition, the absorption of which, when slowly formed, is much more liable to contaminate the system than the discharge of pus into the mouth from an alveolar abscess. Furthermore, inflammation of exposed dentine cannot surely be entirely arrested in any case by filling the pulp-cavity with any known extraneous material, and especially is handicraft wanting to even imperfectly protect the minute and often tortuous canals leading down to the apical foramina of the majority of the teeth. The most skilful operator can, under these circumstances, at best but hope that his work will not soon be followed by trouble arising from the escape of deleterious matter into the tissues about the root, or the development of pericementitis. He is able only to offer a hopeful but uncertain prognosis in these cases, but the patient may all the same remain an unconscious sufferer in respect to the slow but persistent irritation of the surrounding tissue; the irritation thus propagated from the dead tissues of the dentine will sooner or later most likely be transmitted through the tissue of the cementum to the periosteum. It is true that through the periosteum alone the dentine may long derive some nourishment, yet in the meantime periostitis often exists, so that the patient, without having actual pain, is always conscious of undue tenderness about the root of the dead tooth, which may be much exacerbated by a severe cold or any sudden wrenching of the tooth, as in biting some hard substance. A person with a pulpless tooth in his jaw which has been stopped, cannot even consider himself free from the danger of reflected irritation and its various consequences, and he may, moreover, at any moment experience more or less inflammation about its roots.

That a defective tooth in many instances may remain in the jaws of a healthy person for an almost indefinite period without doing appreciable harm, surely does not warrant the risk being taken in a very large number of cases, since what may be tolerated quite well in the strong and robust will set up serious trouble in those who are run down from any cause, in subjects of catarrhal affections, and the like; in these the more an offending tooth is "treated," the worse in many cases it will be for the patient. The writer has been much impressed by witnessing the sufferings endured by weak and nervous persons during ineffectual attempts to "treat" and "cure" their pulpless teeth, and he cannot but regard such practice as questionable. Indeed, his experience in practice leads him to believe that some diseases cannot be successfully treated so long as dental irritation is maintained.

It is in respect to matters of this kind that a medical opinion is often much needed. The question of the usefulness of retained dead teeth in certain cases is of such importance that persons are willing to assume more or less risk to health rather than be deprived of a useful grinder or an ornamental incisor—these are questions which no discussion can ever settle.

Samuel Sexton, M.D.

12 West Thirty-fifth Street, New York, October 28, 1884.

An American Physician to Deliver the Gulstonian Lectures.—Prof. Wm. Osler, of Philadelphia, will deliver the Gulstonian Lectures at the College of Physicians, in London, in 1885.

PROFESSOR ALFRED L. LOOMIS ON COLORADO CLIMATE.

To the Editor of The Medical Record.

Sir: Of the recent medical publications there is perhaps none that is receiving more general attention from the profession than Professor Alfred L. Loomis's "Practical Medicine," and there is probably no portion of this work which will be more eagerly read, or which will carry more weight, than that which has reference to pulmonary troubles, and especially to the climatic cure of phthisis. The wide-spread reputation of the author as a diagnostician in these troubles, and his well-known experience, will give, in the mind of the general reader, the weight of authority to whatever he may say on these points.

That Professor Loomis places great stress on the element of climate in the cure of phthisis is seen by his assertion that "each year's experience impresses on me the conviction that while climate, more than any other agent, has a controlling influence over phthisical developments, each case must be carefully analyzed before any definite directions can be given as to the climate best suited to it."

To the medical profession of the Rocky Mountain region this question is of such vital interest that our first point of investigation, on receiving the "Practical Medicine," was to see what Professor Loomis had to say about our climate. Our curiosity was whetted the more because of our remembrance that, in his treatise on the "Diseases of the Respiratory Organs, Heart, and Kidneys," page 281, he has committed himself to the opinion that "the climate of Colorado is mild and peculiarly dry, from its elevation; the atmosphere is highly exhilarating and peculiarly healthful. Here flowers grow at the height of eight thousand feet; usually at a much less height vegetation does not flourish. The rainfall for one year was about sixteen inches. *In some sections there are but slight variations of temperature throughout the year. The winter days are those of a northern summer, and the summer is but little warmer than winter.*" (The italics are mine.)

What was our surprise, then, to read in his "Practical Medicine," page 205, that "there is one grave objection to Colorado as a winter refuge—the enormous monthly and also diurnal range of temperature must severely try any invalid. During March, 1880, the thermal range at Denver was eighty-three degrees, and in December, 1876, it amounted to ninety-three degrees; a change in a single month greater than occurs at London in a whole year, and greater than occurs at New York in a whole winter."

Certainly there is a wide variance between these two opinions, and as it is not to be presumed that the character of the Colorado climate has been changed to such a degree, in a few years, as these two quotations would lead one to suppose, the reader can simply conclude that Professor Loomis's personal experience of our Colorado climate has led him to change his views, and that he no longer holds that our "winter days are those of a northern summer."

The writer is, however, somewhat doubtful whether this would be a correct conclusion, and he thinks it more probable that Professor Loomis has been misled by others in his opinion expressed in the "Practical Medicine." My reason for thinking so is, that in looking over the files of the *New York Herald*, under date of December 29, 1883, in an editorial entitled "Winter Resorts for Invalids," beginning: "Dr. S. A. Fisk, writing from Denver, recently published in *Science* an interesting paper containing the results of an extensive investigation of the relative merits of different American sanitaria in the cure of consumptives," I find the following: "But there is one apparently grave objection to Colorado as a winter refuge, which Dr. Fisk seems to estimate too lightly. The enormous monthly and also diurnal range of temperature must severely try any invalid. During March, 1880, the thermal range at Denver was 83 degrees, and in December, 1876, it amounted to 93 degrees—a change in a single month greater than occurs at London in a whole year, and greater than occurs at New York in a whole winter."

Further on in the "Practical Medicine," pages 206 and 207, is the following, viz.: "Recently *Davos am Platz*, in the Swiss Alps, has been most extensively visited. Williams, Albutt, and other English physicians give very favorable reports of it. It is 5,200 feet above the sea, very dry, but not windy, and not changeable. Davos possesses also the unique climatic characteristic of freedom from high winds (the records showing that from October 1, 1880, to March 31, 1881, there were one hundred and thirty-four days with 'no wind'), while its 'sun temperature' rises even in January, as Dr. Franklin notes, as high as 150°—conditions which admit of much invaluable out-door exercise by invalids. Doubtless some high winter resort combining these vitalizing conditions can be found in the Southwestern Rocky Mountain region of our own country."

From the editorial already cited I quote the following: "Davos possesses also the unique climatic characteristic of freedom from high winds (the records showing that from October 1, 1880, to March 31, 1881, there were one hundred and thirty-four days of 'no wind'), while its 'sun temperature' rises even in January, as Dr. Franklin notes, as high as 150°—conditions which admit of much invaluable our-door exercise by invalids. Doubtless some high winter resort combining these vitalizing conditions can be found, as Dr. Fisk suggests, in the Southwestern Rocky Mountains."

These quotations seem to me to justify the conclusion that in speaking of the Colorado climate, Professor Loomis has drawn from the statements of others rather than given the results of his own experience.

To be sure, he may have been responsible for the editorial from which I have quoted, but a comparison of the two following passages makes me think that this cannot be.

In the "Practical Medicine," page 206, he says: "The extraordinarily dry belt of country which runs northward from San Antonio, Texas, has begun to endanger the supremacy of Florida as a health resort for the consumptive. That this belt offers some climatic advantages for weak lungs over the mild but rather humid air of Florida cannot be doubted."

In the editorial cited is the following: "Another writer in the *Philadelphia Medical Times* has also recently called attention to the virtues of our western climate in the treatment of consumption, and expresses the opinion that 'the extraordinarily dry belt of country which runs northward from San Antonio, Texas, has begun to endanger the supremacy of Florida as a winter health resort for the consumptive.' That this belt offers some climatic advantages for weak lungs over the mild but rather humid air of Florida cannot be doubted."

I should like to call attention to the fact that Professor Loomis speaks of the air of Florida as being "rather humid," and yet a little earlier, on the same page of his "Practical Medicine," he publishes the following: "Minnesota has a dry, cool, exhilarating climate. Southern California, Georgia, and South Carolina have a dry, warm atmosphere."

Now the records of the Signal Service Bureau, U. S. Army, accessible to anyone, show that the mean relative humidity, for a series of four years, was from 65° to 69° of saturation for Minnesota, Southern California, South Carolina, and Georgia. We give the data, viz.: Augusta, Ga., 69.2; Jacksonville, Fla., 69°; St. Paul, Minn., 67.3; Los Angeles, Cal., 65.8°; Denver, Col., 45.8°. These figures, together with the maps published by the Signal Service Bureau, at the earnest solicitation of the Colorado State Medical Society, prove conclusively that if the air of Florida is "*rather humid*," that of Southern California, Georgia, and South Carolina cannot be called

"*dry*"—certainly not in comparison with the dry air of the Rocky Mountain region.

In conclusion, the writer wishes to state that the two instances of the extreme range of temperature, cited by the editorial writer and also by Professor Loomis, are correct, and are taken from the records of the Signal Service; yet it seems to him that the citation of such unusual ranges is calculated to give an erroneous impression of our climate, for, as a rule, our winter days are warm and pleasant, so that it is not uncommon for persons to sit with doors and windows open, or to have picnics in the open air, even in the heart of January. The illustrations cited may do very serious injury to a climate whose beneficial effects "are incontestibly proved by hundreds of cases," and they may, especially when given the weight of Professor Loomis's authority, deter invalids from coming to a place of which so impartial a writer as Dr. Edward T. Ely has remarked: "Colorado can easily rest on its own merits. . . . Despite all objections which may be raised, the climate is probably, as we have already said, the very best of its kind at present available for invalids, and destined to grow in popularity as its merits become more accurately understood."

SAMUEL AUG. FISK, M.D.

373 CURTIS STREET, DENVER, COL.

BRIEF NOTE ON THE TREATMENT OF FRACTURE OF THE CLAVICLE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Fracture of the clavicle is one of those ailments which are not so serious as troublesome, from the difficulty of keeping the fractured ends in apposition. All the various apparatus for that purpose have failed, and the consequence of failure is a protuberance on the point of fracture, persisting through life, unsightly if not inconvenient.

To avoid this result I propose the following plan of treatment: Turn the arm of the affected side behind the back, and bring it as far backward as possible in such manner that the dorsal side of the hand comes to lie on the opposite buttock. To retain this position it is necessary only to fix a narrow strip of adhesive plaster around the wrist and thence around the body, or the whole arm may be fixed on the body by means of a roller bandage from under the axilla down to the crista iliæ.

I have adopted this plan for the last two years, treating in that way about a dozen cases (with one exception, all children), and the result in every case was a speedy union without deformity. The only drawback is the difficulty of lying down, and in fact in my first case, a girl of ten, the patient sat up in a chair day and night for two weeks, but I found after a while that the children are able to obtain perfect rest sleeping on the sound side.

S. TELLER, M.D.

306 WEST THIRTY-THIRD STREET, NEW YORK.

"THE HEMORRHOID QUACK."

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: *A propos* of the communication which you published in a recent issue from Dr. Stevens, of Chillicothe, Mo., and in view of the fact that all parts of the country are infested by a class of illiterate, incompetent, and unauthorized "doctors" who advertise to "cure piles without pain," etc., I desire to report the following case which has very recently fallen under my notice.

General ——, a retired army officer, has long been a friend and occasional patient, his general health being much impaired from chronic cystitis and gastro-intestinal catarrh. He is a monomaniac on the subject of quacks and their remedies, and I suppose he has dosed himself with about every "safe" and sure cure ever concocted. The literature of suburban rocks and fences is to him a gospel, and the testimonials of eminent judges and divines are revelations.

Several days since I was summoned in haste to see the General. On arriving I found him in great pain, which he referred to the rectum, and explained by saying that he had been operated upon for piles, a few days previously, by a "doctor" whose advertisement he had read, and who had exhibited a number of very flattering testimonials from officers of the army and navy. Upon examination I found a sloughing ulcer upon the site of what had evidently been an external hemorrhoid. The bowels, too, he said, were acting very frequently, and seemed to be beyond voluntary control. Packing the sore with iodoform, and prescribing three drops of laudanum to be taken every two hours, with the object to heal the wound, control the pain, and restrain the bowels, I withdrew.

The wound progressed well, but in spite of opium, both by the mouth and rectum, frequent semi-involuntary alvine evacuations occurred. Three days after I first saw him he had a sudden and enormous discharge of clotted and fluid blood mingled with fecal matter. The odor was horrible. I now gave injections of ergot and hamamelis, and ordered opium suppositories to be continued. For forty-eight hours all went well, when there was another copious discharge of very offensive matter, consisting of blood, feces, and pieces of dark-colored membranous shreds and flakes. The patient was in a state verging upon collapse, and complained greatly of pain and pressure in the rectum. The pulse was weak and intermittent; surface cool and bleached, and countenance pinched. Vomiting came on, and things began to look serious. Examining the anus I saw a dark and putrid substance protruding, and, drawing upon it, succeeded in extracting about three inches of what proved to be a portion of the mucous membrane of the rectum. I was prevented from delivering the entire mass by attachments at the anal margin, and had to detach with scissors. Learning now that the quack had used some sort of injection, which I concluded was carbolic acid, and that he had either injected a number of hemorrhoidal tumors, or had ignorantly allowed a quantity of the solution to enter the bowel, I saw that I had to deal with a case of inflammatory sloughing of the lining membrane of the rectum. Digital exploration revealed roughness and great tenderness, and ocular inspection with a speculum showed an extensively denuded surface, congested and bleeding. Seeking to control any further hemorrhage and evacuative efforts, I now cleared away all débris, and, through the speculum, packed the bowel tightly with absorbent cotton soaked in a strong solution of glycerine and tannin, and afterward inserted a suppository containing two grains of opium. This treatment, I am happy to say, proved effective, and I believe my indiscreet friend is out of danger.

Well, here is an instance where an intelligent man places himself under the care of an impudent pretender for a disease which we all treat with the greatest caution, and always with anxiety; and he almost pays the penalty with his life. This pile-driver insisted on our friend taking his usual exercise, and did not even consider it necessary to see him again after the operation. But what are we to do about it? The public are free to consult whom they choose, and the religious press continues to spread the glad tidings of the miraculous performances of any and every impostor who will *pay* their regular price.

Unfortunately such results as here narrated are not generally circulated. Very respectfully,

GEO. B. FOWLER, M.D.

11 WEST FORTY-FIFTH STREET, NEW YORK.

THE PREVALENCE OF CONSUMPTION AT DIFFERENT AGES OF LIFE.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: It may be of interest, in relation to the communications of Drs. Holden and Baker, in THE RECORD of July 12th and August 30th, relative to the above subject, which having been absent I have but just observed, to

present some results and conclusions found by myself in 1860. They are embodied in a paper, afterward published, read by me before the American Geographical and Statistical Society. Up to that time these statistics relative to the mortality from consumption under various conditions of climate, age, sex, etc., were the most extensive that had appeared, one table comprising 27,771,728 deaths from all diseases occurring in various parts of the world between 1804 and 1860. In this paper I have given three tables illustrative of its prevalence at various ages, the first from Boudin ("Géographie et Statistiques Médicales"); the second, constructed by myself, of 88,427 deaths from consumption occurring in various cities and countries; and the third, constructed by me from the Registrar-General's reports of deaths in England from 1848 to 1852, in 1856, and in London in 1857.

The table of M. Boudin relates to the deaths from consumption in England and Wales in 1847. It shows that of 53,317 deaths there occurred—

Under the age of 5 years							9	per cent.
Between 5	and	10	years				3.1	"
" 10	"	20	"				7.5	"
" 20	"	30	"				14.7	"
" 30	"	40	"				26.4	"
" 40	"	50	"				12.8	"
" 50	"	60	"				7.9	"
" 60	"	70	"				4.6	"
" 70	"	80	"				1.3	"
" 80	"	90	"				0.14	"
Above		90	"				0.035	"

The second table shows that of the 88,427 who died from consumption—

25.5	per cent.	died	between	the	ages	of	20	and	30;
20.5	"	"	"	"	"	"	30	"	40;
12.5	"	"	"	"	"	"	10	"	20;
12.3	"	"	"	"	"	"	40	"	50;
11 3	"	"	"	birth	and	10	years	of	age;
7.7	"	"	"	the	ages	of	50	and	60;
6.4	"	"	"	"	"	"	60	"	70;
1.3	"	"	"	"	"	"	70	"	80.

It has been variously stated by writers (I quote from my paper) that consumption is developed at an earlier age among females than among males. The following table shows this is not true before the tenth year, yet between that time and the forty-fifth year the various decades furnish a greater percentage of deaths among the females than the males; but that after the forty-fifth year the percentage is greater among the males.

Third table, of 409,862 deaths occurring in England and in London:

						Males.		Females.	
Under 5 years of age						8.4	per cent.	6.9	per cent.
Between 5	and	15	years			6.2	"	7.8	"
" 15	"	25	"			22.92	"	26.1	"
" 25	"	35	"			22.6	"	24.9	"
" 35	"	45	"			16.9	"	17.0	"
" 45	"	55	"			11.9	"	9.5	"
" 55	"	65	"			0.7	"	5.2	"
" 65	"	75	"			0.3	"	2.2	"
" 75	"	85	"			0.02	"	0.03	"

To save space, I have not given in the above tables the full figures, that is, the number of deaths at each epoch, but have simply calculated the percentages.

Though I recognize the cogency of Dr. Holden's statement, that, in order to show the age at which death from consumption is most liable to occur, the proportion of the deaths to the number of the living should be considered, and that a large proportion of deaths from it at ages when there are the greatest number living, does not show that it is most liable to occur at those ages; still, the above tables, I think, are of equal value in showing, without regard to the living, the periods when death from the disease is most liable to occur.

Yours truly,

H. B. MILLARD, M.D.

NEW YORK, October 20, 1884.

A PHYSICIAN'S EXPERIENCE IN HIS OWN FAMILY IN CHILDBIRTH AND INFANT FEEDING.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Your readers will all recall the discussion of puerperal fever in THE RECORD last winter. My wife's term of gestation ended in March; she always had been in delicate health; there was considerable of the fever in our city, and fatal in many cases, one young lady dying with it only a few doors from us a week or two before my wife's confinement.

It will not be hard for any one to imagine my condition of mind as the time passed. Whether I was to follow the advice of our most enlightened teachers on the subject or not constantly worried me, as doubtless it does many others in similar cases now.

Finally, however, I followed the advice of our Southern brother, who advised throwing away the bed-pan and having the patient sit up several times a day to urinate, and used no internal wash of any kind, but kept every thing scrupulously clean around her. My wife did perfectly well without any trouble, and I for one am convinced that it is wrong to fully follow the advice of one of our teachers and keep the patient austerely on her back for fear of post-partum hemorrhage. To more fully indicate my feelings I will add that for the month of March I refused to attend other cases, and turned away ten, I think, as I for one feel fully convinced that the fever is very often carried to patients both by the physician and also by the nurse.

After a few weeks my wife lost her milk and was unable to nurse the baby at all. Now I was in another trouble. From my own, and the experience of others, I knew that a bottle-fed baby, here in the city, stood a very poor show for living, and that many that did live were poor, feeble, emaciated little beings. I read up almost everything on the subject of infant food, and tried some of the well-known preparations, in combination with milk, which I never fully gave up, but they did not seem to work satisfactorily. I sent the baby in the country, but it was troubled there more than ever, during a wet period in July which we had.

Finally, I got extractum pancreatis and followed the directions, only I used more than half water, and when he was troubled the most and his food seemed to pass entirely undigested, I used two-thirds water. The baby began to improve at once, and is now one of the healthiest babies around here. I kept him in the country—Orange County—where he could have fresh morning's milk, until near the middle of this month, September. When born he weighed a little less than eight pounds; now he is one week over six months and weighs almost three times as much, his flesh is solid, and he looks far better, and is as large as many babies one year old. I continued to use the pancreatis, but do not follow the directions. I take nearly two-thirds milk off the ice, add the pancreatis and soda, then add hot water and feed at once. At night I prepare two bottles and put on ice, or outside the window when cool, although we rarely need but one, and often do not use any. If needed in the night I heat on an alcohol stove in a few minutes, and give at once. The good derived from the pancreatis is all, or nearly all, done in the stomach.

The strangest part of it is that the baby seems to do fully as well, and we think better, on the milk we get here in the city.

My conclusions are that babies can be brought up on milk easily and well under favorable circumstances. Pancreatis and soda aid materially, especially if the food has been passing or rejected in an undigested state.

But I believe it is far more important to dilute the milk with one-half, and often in young babies with two-thirds, water. And above all things keep the feet warm and have the diapers both dry and warm.

Respectfully, G. F.

NEWARK, N. J.

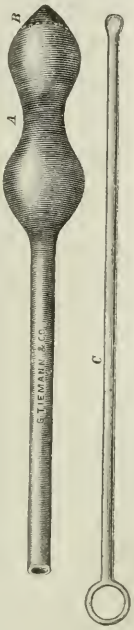
New Instruments.

A NEW MODIFICATION OF BARNES' DILATOR.

By GEORGE COWAN, M.D.,

DANVILLE, KY.

HAVING had some practical experience recently of the difficulties not unfrequently met with in introducing and retaining *in situ* during their expansion the Barnes' dilators, I have had constructed, for future use, by Messrs. Tiemann & Co., of New York, a modification of this apparatus, which, it is hoped, may in some measure remove the troubles met with in their use.



In the Barnes' dilator the pocket into which the probe is inserted for introducing the bag serves as a serious obstruction to its easy introduction, besides being placed externally and to one side of the bag—a very unsuitable point upon which to direct the force which is to guide and push the dilator into its place in the canal. Furthermore, the distal extremity is unnecessarily blunt or flat.

In the second place, it is a flat oval on cross-section, while the cervical canal, when partially dilated, is probably more nearly cylindrical in form. The consequence is that neither the waist nor extremities of the dilator can be expanded so as to give it the form best adapted for its retention when the cervix has been slightly dilated.

The modification which I have had made, and which the accompanying diagram will serve to illustrate, is circular on transverse section throughout its length, and has a tapering distal extremity for its easy introduction into the cervix uteri. The probe which accompanies it is a small brass rod, having a small button-shaped extremity, and is introduced through the gum tube to the inside of the bag, and finally lodged in the centre of the extremity, thus enabling the bag to fold and adjust itself neatly and closely around the probe during its passage through the cervix and along the canal, while the force is applied in the most advantageous position, *i.e.*, inside the dilating bag.

I beg to offer these modifications of the Barnes' dilators to the consideration of the profession as better adapted, I trust, to successfully imitate nature's inimitable provision for dilating the cervix.

A NEW SCROTAL COMPRESSOR.

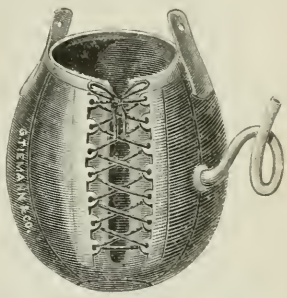
By JESSE HAWES, M.D.,

GREELEY, COL.

LET me call the attention of that portion of the profession who have to deal with inflamed testicles to a device recently made at my request by Tiemann & Co.

It is composed of two rubber bags, the inner one easily distensible, one within the other, and united so as to form an air-tight compartment between the outer and inner layers. This double bag is open on one side from the "mouth" nearly to the bottom; on each side of this opening or "slit" are cemented pieces supplied with eyelets; a small rubber tube perforates the outer layer and is cemented carefully to it. Other pieces are attached to its upper part to aid in suspending it to a waist-belt.

The double bag is sufficiently large to receive the largest swollen testicle. Placing the testicle within the bag, its mouth completely encircling the cord, the slit is carefully closed by lacing; air is then blown from the



mouth, or by a syringe, through the rubber tube into the air-tight space. The compression is perfectly equal and can be exerted to any extent desired; the air is prevented from escaping by simply bending and tying the tube.

Its advantages are these: Hot water can be conveyed into the air-tight space, giving us a warm or hot application. A cloth moistened (*e.g.*, with a lead and opium wash) can be applied about the testicle before placing it in the compressor. One compressor will fit all sizes of testicle. There is no need of shaving the scrotum. It is applied in a moment. When the swelling has decreased the elasticity of the rubber still continues to exert a moderate pressure, and the patient himself may in a moment increase the pressure if it is desired. In short, in my experience, its cleanliness, its perfectly equal compression, the ease with which it is managed, and the comfort it gives the patient, seem to fill every requirement that a compressor should have.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from October 26 to November 1, 1884.

ALDEN, C. H., Major and Surgeon. In addition to his duties at Fort Snelling, Minn., to perform the duty of attending surgeon at Department Headquarters. S. O. 127, Headquarters Department of Dakota, October 23, 1884.

TOWN, F. L., Major and Surgeon. Assigned to temporary duty as Post Surgeon, Fort Clark, Texas. S. O. 145, Department of Texas, October 27, 1884.

BENTLEY, EDWIN, Major and Surgeon. To be relieved from duty at Fort Clark, Texas. S. O. 145, Department of Texas, October 27, 1884.

WILSON, W. J., Captain and Assistant Surgeon. Assigned to temporary duty at Fort Trumbull, Conn. S. O. 220, Department of the East, October 27, 1884.

CORBUSIER, W. H., Captain and Assistant Surgeon. Assigned to duty at Fort Bowie, Arizona Territory. S. O. 99, Department of Arizona, October 22, 1884.

LA GARDE, L. A., Captain and Assistant Surgeon. Assigned to duty at Fort Ellis, Montana Territory, relieving First Lieutenant G. E. Bushnell, Assistant Surgeon U.S.A., who, upon being relieved, will report for duty at Fort Snelling, Minn. S. O. 126, Department of Dakota, October 22, 1884.

EVERTS, EDWARD, First Lieutenant and Assistant Surgeon. Leave of absence extended one month. S. O. 107, Headquarters Division of the Pacific, October 21, 1884.

MCCAW, WALTER D., First Lieutenant and Assistant Surgeon. Ordered from Fort Craig, New Mexico, to Fort Wingate, New Mexico, for duty. S. O. 92, Headquarters District of New Mexico, October 21, 1884.

Official List of Changes in the Medical Corps of the U. S. Navy, during the week ending November 1, 1884.

BEARDSLEY, GROVE S., Surgeon. To Washington, D. C., for examination preliminary to promotion, and as to qualifications for sea duty. October 31, 1884.

CRAIG, THOMAS C., Passed Assistant Surgeon. To the Alliance for temporary duty. October 31, 1884.

GARDNER, JAMES E., Passed Assistant Surgeon. To the Naval Hospital, Norfolk, Va. October 28, 1884.

HALL, JOHN H., Passed Assistant Surgeon. From the Naval Hospital, New York, to the Navy Yard, Mare Island, Cal. October 29, 1884.

HORD, WILLIAM T., Medical Director. To continue duty as member of the Retiring Board until January 1, 1885. October 27, 1884.

LOVERING, P. A., Passed Assistant Surgeon. To the Naval Dispensary, Washington, D. C., for temporary duty. October 27, 1884.

TURNER, THOMAS J., Medical Director. To continue duty as member of the Retiring Board until January 1, 1885. October 27, 1884.

STEELE, JOHN M., Passed Assistant Surgeon. To the Naval Hospital, New York. October 29, 1884.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending November 1, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
October 25, 1884	0	53	29	5	45	45	0	0
November 1, 1884	0	51	29	2	51	67	0	0
Deaths.								
October 25, 1884	0	13	6	5	4	33	0	0
November 1, 1884	0	14	0	2	8	33	0	0

THE OWNERSHIP OF A MEDICAL CURIOSITY.—The newspapers report a very curious case in a Virginia court. A police officer of the city of Petersburg, named William Shank, was for a considerable time visibly growing weaker and thinner, while his appetite continued enormous, when one day last week he vomited a hideous-looking lizard about ten inches long and two inches in circumference. The lizard was dead when ejected, and was thrown away. It was found and presented to Dr. John B. Hartwell, a homœopathic physician, who put it in alcohol to preserve it. Dr. Shank, a brother of the policeman, heard of this and demanded the specimen from Dr. Hartwell, who agreed to give it up if payment was made for the trouble and expense of preserving the curiosity. Dr. Shank refused to make any such payment, and brought suit in one of the inferior courts for unlawful detention, and secured judgment against Dr. Hartwell. The latter has appealed the case to the Hustings Court, and the respective claims of the two physicians will there be determined.

THE QUESTION OF ISOLATION IN THE INFANT HOSPITALS OF PARIS.—If one may judge from the numerous complaints appearing from time to time in the medical journals of Paris, the management of the hospitals in that city is far from being satisfactory. Among all the papers the *Progrès Médical* is conspicuous for its increasing efforts to bring about reforms in this department of the government. In a recent editorial it takes the Administration de l'Assistance Publique sharply to task for its culpable neglect in the matter of isolation in the hospitals for children. It is only within the last five years that any pretence has been made of keeping children with diphtheria apart from the other inmates of the hospitals, and in one of these a separate pavilion for diphtheria patients was only erected in May, 1882. But as far as other diseases are concerned there is not at the present day the slightest provision made for isolation. So glaring is this evil and so well known that, as was asserted not long ago by Dr. Maunoir, these hospitals have a reputation among certain portions of the population of being where superfluous children can be lawfully and at the same time effectually disposed of. In one of the three services of one of the three hospitals in the year 1881, fifty-two children contracted measles in the wards and thirty of these died. By a simple process of addition the writer calculates that two hundred and fifty children are sacrificed in the three hospitals every year by measles alone, and by measles contracted within the hospital walls He adds that by a low estimate the number of victims of contagion from all diseases in the infant hospitals of Paris may be set down at five hundred annually. Such a state of affairs seems almost incredible, and one would suppose that the facts in the case could never have been presented to the authorities. Yet the writer asserts that it is not through ignorance that the administration sins, for its attention has been called time and again to these and other abuses, but without avail. The authorities sit by supinely and fold their hands while five hundred little innocents are sacrificed every year to their brutal indifference. We are accustomed in this country to rail against our public officials and to think that in no other land are the people's servants so indifferent to the people's wants. But very few citizens of New York would care, we imagine, to exchange our Commissioners of Charities and Correction for the Administration de l'Assistance Publique of Paris.

THE MENTAL STATES INDUCED BY FRIGHT.—The *Wiener Medizinische Wochenschrift*, of July 19, 1884, contains an abstract of an interesting account of the earthquake at Ischia, written by Dr. Fazio, an eye-witness of the scene. The emotions awakened by the catastrophe were of the most varied character. During the fifteen seconds that the shock continued everybody stood still, seemingly rooted to the ground with terror. Men were weak in the knees and shook as with ague, feeling as though they were about to fall, but none of them had convulsions, delirium, or syncope. But soon this stillness was broken by loud cries and howls, and every one rushed toward the shore. Then women and children fell into convulsions or appeared to be semi-paralyzed and speechless. Rudeness and brutality were mingled with self-sacrifice and heroism of the most exalted character. Six hours after the catastrophe the stillness of death reigned over Casamicciola. Men wandered about the ruins half clad and silent as if risen from the grave; women were excited and hysterical; children of eight or ten years seemed dazed and stupefied, while smaller children stood around unconcernedly eating whatever they could find in the ruins. It is most interesting to see the different ways in which individuals were affected by the shock. The keeper of a refreshment booth who had lost everything kept offering his delicacies to those who passed by, just as though everything had not been swept away. A surgeon, covered with blood and sorely wounded by the fallen beams, was concerned only for his instruments, and inquired after them of everybody whom he encountered. An hysterical woman, who had been bed-ridden for months, jumped up and saved herself by flight, and remained permanently cured. Many who were at first brave and full of energy became later depressed and apathetic, or had convulsions or alternate fits of laughter and crying. Sometimes a melancholia was induced which continued for months, and many became incurably insane. Abortion was very common, and there

were many cases of suddenly arrested menstruation. The sexual appetite was universally destroyed for many days after the earthquake, and in many instances there was also an aversion to food. There were numerous cases of retention of urine, sometimes lasting for days and demanding catheterization. There were several instances in which the hair was whitened by fright, and even some boys of ten to fourteen years showed heads sprinkled with gray. Many of those buried in the ruins exhibited the greatest indifference to their fate, following listlessly with their eyes the motions of those busied in their rescue. A foreign officer whose legs were imprisoned under some heavy timbers drew out a cigarette and smoked it with the utmost nonchalance. One man, as soon as he was pulled from the ruins, shook his rescuer by the hand and presented him with his card. Another, who lay beneath the débris for twenty hours, immediately looked at his watch in order to record the exact instant of his deliverance. A lady who had just been extricated from a mass of rubbish would not budge from the spot until she could ascertain the fate of her pet dog, which was buried with her. One woman who heard a man calling for his daughter, deceived him so cunningly that she was rescued by him before the trick was discovered. Most of the people, however, who were imprisoned beneath the ruins were too indifferent to their fate to attempt any such deception, and most of them had not the slightest idea of the length of time during which they were buried. Most of those who were wounded by the falling buildings underwent the necessary surgical operations without experiencing any pain, though some were hyperæsthetic.

What Constitutes Unchastity.—A curious point as to the proper admission of testimony was presented on the appeal of a case, where the action was for slander in charging an unmarried woman with unchastity. The defendent, in answer, alleged that there was such an increase in the size and such a change in the physical appearance of the plaintiff as to induce him to believe that she was pregnant. One of the witnesses on his behalf was a woman who had borne children, and who was asked if the plaintiff, as to her physical appearance, appeared like women do when they are pregnant. This question was not allowed, and the appeal from the ruling was the main point to be decided. The court held that it was proper to ask a witness his opinion whether a person was drunk, because that fact is better determined by the direct answer of the witness than by any description of the person's conduct, and that there was a similarity between such a case and that where the fact of pregnancy was involved. The court was of the opinion that "if the appearance of the plaintiff, from any cause, was such that women who had had experience would testify that she appeared like a pregnant woman physically, the testimony certainly was important to mitigate the damages to which the defendant might be subjected. And if the plaintiff insists that the witnesses should have stated the facts in detail, in order that the jury might judge whether plaintiff's appearance was like that of a pregnant woman, it is obvious that no description of enlargement of size and the like would convey an accurate idea of the plaintiff's whole appearance." It was therefore decided that it was proper to ask the opinion of the witness whether the appearance of the plaintiff was like that of a pregnant woman.

Is Cannibalism Necessarily Murder?—A very interesting case will shortly be brought to trial in England, to determine whether cannibalism is necessarily murder. The facts are these: The yacht Mignonette, under Captain Dudley, was disabled in a gale between Madeira and the Cape Colony last July, and the crew, consisting of the captain, two men, and a boy, took to the boat. They soon exhausted their small supply of provisions, and no help was at hand in mid-ocean. After a little they caught a turtle, and this sustained life for some days. When this was eaten, starvation began. After some days it was proposed that they should cast lots to see which should die to save the others, but this plan was rejected. When fifteen days had passed without food, after further debate it was decided that the boy, who was very weak and sinking fast, should die, and the captain, after asking God to pardon what he was about to do, killed the youth. For three days the survivors subsisted on the boy's flesh, and then a passing vessel picked them up and took them into Falmouth. Captain Dudley did not conceal the facts, but promptly reported them, not expecting, apparently, that he would be held criminally liable. The authorities of Falmouth, however, arrested him on his own sworn statement, and the trial for murder will soon take place. It will be seen that these circumstances are quite different from those of the Greely party, as there only the flesh of the dead soldiers was eaten. The moral question is much the same, however, and the Dudley case will certainly give rise to great discussion as to the propriety of eating human flesh under any circumstances. It should be remembered that in the case of the Mignonette the killing of the youth, no doubt, saved the lives of the others, and had not this been done all would have probably died. This does not affect the moral aspect of the case if the act was wrong under any conditions, nor does the further fact that the boy would soon have died from natural causes; but these circumstances will inevitably have some effect upon a jury called upon to determine whether Captain Dudley shall die for his act. The question of insanity will also assume a prominent position on the trial, for it is certainly a matter for investigation whether persons exposed to the weather for fifteen days in an open boat, without any food, are responsible for their acts. The outcome of the trial it is not difficult to surmise, for no matter whether public sentiment abstractly condemns Captain Dudley's conduct or not, it is not at all likely that any jury will bring in a verdict of guilty of murder. The chances are wholly in favor either of a disagreement or acquittal.

Sublimate Injections in Joint Diseases.—Professor Vogt has obtained good results in three cases of so-called gonorrhœal rheumatism of the knee by intra-articular injection of corrosive sublimate. He employed a solution of bichloride of mercury, 1½ grain; chloride of sodium, 15 grains; distilled water, 12 drachms. Of this solution 45 to 75 minims were injected into different parts of the joint. The injections were repeated every four days, but how long the treatment was continued the author does not state. At the time when these cases were reported he stated that the cure could be regarded as established, massage and passive motions being all that was necessary to restore the functions of the joint. In other non-specific bone and joint diseases a somewhat extensive employment of this mode of treatment leads the author to believe that "in certain cases much can be accomplished by intra-articular injections of corrosive sublimate."—*Centralblatt für Chirurgie*, August 23, 1884.

Does Decapitation Cause Instant Death?—We noticed recently some experiments made by M. Laborde with the head of Campi, who was executed in Paris for a murder, which almost seemed to show that life might be retained for a time in a decapitated head by supplying the brain artificially with blood. The publication of these results in the *Revue Scientifique* has called forth a communication from another writer who witnessed an execution in Saigon some years ago, a brief account of which we abstract from the *Tribune Médicale* of August 10, 1884. Decapitation in Annam, it seems, is performed by a single sword stroke on the neck, the criminal kneeling down and being forced to flex the head so as to separate as widely as possible the vertebræ. Thus it sometimes happens that the cord is severed by a clean cut without being either contused or concussed. The writer being desirous to ascertain whether consciousness were retained in the separated head, attracted the attention

of the criminal to himself by speaking in a loud tone to one of the officials just before the execution took place. He was successful in this, for the condemned man looked up and gazed intently at the speaker for a moment. He then knelt down and received the death-stroke. It so happened that the head in falling did not roll, but rested upright on the sand in such a way that the flow of blood from the veins of the neck was arrested. In an instant the eyes were opened and fixed themselves upon the writer, who stood very near. He moved quickly to one side and the eyes followed him; then he returned more slowly to his former position, and the eyes turned again in that direction. They followed him but for an instant, however, and were then suddenly turned away, while an agonized expression overspread the features, the mouth opened spasmodically, and the face seemed to gasp for breath. The movement of the jaw overturned the head and it rolled on the sand and gave no further signs of life. Could the cerebral circulation have been maintained in this case as it was in that of Campi, by connecting the vessels with an opened artery of a dog, the results might have been startling enough to disturb even the most phlegmatic experimenter.

The Value of Cinchonidia.—Dr. J. Weichselbaum, of Savanna, Ga., writes us in reference to the editorial in The Record of July 19th, upon the value of cinchonidia. He states that "in the female ward of the Savannah Hospital, the service of Dr. R. J. Nunn, we have been using the sulphate of cinchonidia for some time. We use the following formula:

℞. Cinchonidia sulph..... gr. v.
Sodii bicarb..... gr. v.
M. S.—One dose for adult;

with the same result that we had with the sulphate of quinine. We used it in all cases we would have used the sulphate of quinine. We never had any of the trouble complained of by Professor J. Marty." Our correspondent adds that of late he has been using the alkaloid cinchonia given with soda, and has had equally good results. The inference from Dr. Weichselbaum's experience is that quinine is no safer or surer than its cheaper allies. This is against the experience of the profession, and invalidates completely Dr. W.'s observations.

A Case of Cancer of the Pancreas—Autopsy.—Dr. F. W. Epley, of New Richmond, Wis., sends us the following: "In view of the fact that the literature upon affections of the pancreas is exceedingly limited; that some of our standard works on pathology pass over the organ with the simple remark that 'the pancreas is seldom examined for disease,' and give no further directions in regard to the post-mortem examination of said organ, and that in the light of more frequent autopsies consequent upon death from obscure causes we can approach nearer the truth in these pathological assertions, I have reached the conclusion that it is the duty of every medical man to report cases which come under his notice where obscure or questionable cases have been cleared up by an autopsy. On May 25, 1884, Sam M—— came into my office and told me he wanted me to see if I could find out 'what in h—l ailed him.' I give his own words, for they are not void of significance in this case. He stated that he had begun to feel badly soon after walking a long distance through snow-drifts in the February preceding. He lost his appetite; had some uneasiness about the epigastrium; had a nasty taste in his mouth; had not slept a wink for weeks, and 'then these d—d black janders come onto him and he wanted to *die* if I couldn't give him something to relieve him.' He was restless, weak, but constantly moving, and was even more impatient than his language indicates. He was a farmer, well-to-do, always quiet and always industrious. Upon examination I found him only fairly nourished; evidently losing flesh; extremely *icteric*, and covered with an eruption simulating bromism, which kept him constantly scratching. His stools were *entirely devoid of color*, except that of prepared chalk. This peculiarity was constant. I found, about two inches to the right of the umbilicus, a small hard tumor, apparently about the size of a small tea-cup, but more pointed. It was hard but freely movable. It was not easily to be seen, but by close attention the abdominal parietes could be seen to glide over the tumor. I diagnosed malignant disease, either in liver or structures closely approximating it, and contrary to my custom gave up the case at once, communicating the facts to his wife. He went to other physicians, and finally struck a lead on two homœopathic doctors, who 'cured him till he died' on December 10th, following. Autopsy revealed cancer, scirrhous form, in head of pancreas, which had drawn up about the common duct of the liver to such an extent that it was impossible to separate the duct, or in fact to distinguish it by the naked eye from the pancreatic tissue. *Hence the jaundice.* There was no obstruction in bowels or stomach, and no other structure was involved to any extent, except a portion of the lesser omentum. It occurs to me that the disease *must* have originated in the head of the pancreas, thereby occluding the common duct and occasioning the early and persistent jaundice. The tumor near the umbilicus proved to be a distended gall-bladder. The liquid it contained was of a pearly hue and quite viscid."

Treatment of Skin Diseases at Vienna.—A correspondent of the *British Medical Journal* writes: "In Professor Kaposi's wards the permanent bath-beds are in constant use. Burns, ulcers, and obstinate syphilides are here treated; in the latter cases, weak solutions of perchloride of mercury may be used with advantage; in the cases of burns, the patients express themselves as being most comfortable; after being in the 'bed' a few moments all pain is lost, and there is no dread of change of dressings, for none are used. Not only does the slough separate and the wound clean, but cicatrization progresses, it is said, more rapidly in the water than under any other treatment. Psoriasis is usually treated with pyrogallic acid, 10 per cent. in traumaticin; goa powder in the same combination is also used. In the treatment of superficial lupus, iodoform in solution, with collodion or pyrogallic acid as an ointment, is used; the former is usually applied after the affected part has been rubbed with a strong solution of caustic potash. Several cases of lichen scrofulosorum have been effectually treated with cod-liver oil internally, and as an external application. A few weeks ago a young man was admitted into the wards suffering from what was at first supposed to be merely a case of severe intertrigo, affecting the perineum and surrounding parts. The severe general disturbance, however, led Professor Kaposi to diagnose impetigo herpetiformis. This disease, of which only about a dozen cases are on record, is usually found in women, and appears to be in some way connected with pregnancy and the puerperal period; one case, related by Heitzman, occurred about the time of the climateric. Two cases only are on record where recovery has taken place. The term herpes pyæmicus, of Auspitz, was upheld, as the disease is one which is probably pyæmic in origin, while its progression is marked by the formation of small, closely aggregated, innumerable bodies, which are pustular from the commencement. From the first the case was associated with high and irregular temperatures, and the patient was treated with antipyretics, simple dressings being applied. The affection, however, gradually spread upward over the abdomen, and smaller patches appeared elsewhere. The patient gradually sank into a somnolent condition; later he was removed into one of the permanent bath-beds, where he appeared more comfortable, and the open surfaces more healthy; it was specially noticed that this change produced, in addition, immediate and sustained lowering of the temperature. The patient, however, gradually sank, and on *post-mortem* examination general peritonitis with effusion into the peritoneal cavity was found."

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Original Articles.

A NEW THERAPEUTIC USE FOR COCAINE.

By F. H. BOSWORTH, M.D.,

NEW YORK.

In using a solution of cocaine in the nasal cavity for its anæsthetic effect I have observed an action which has, as far as I know, not been recorded. When the solution is applied to the mucous membrane it is followed in about twenty or thirty seconds by a very notable contraction in the venous sinuses underlying the part which it reaches, and as the application is continued over the whole membrane covering the lower and middle turbinated bones these sinuses become so rigidly contracted that all the blood which they may have contained is absolutely expelled, and the membrane clings closely to the bony structures, which then become visible in absolute outline.

This action of the cocaine was so entirely unexpected to me in the first case in which I observed it that I continued my observations in a number of cases, and in no single case out of over forty observed carefully has it failed to produce the same result. Every drop of blood was expelled from the erectile tissue in each case. The strength used was a two per cent. solution, and it was applied by means of a pledget of cotton wrapped on a small probe. The effect was usually observed in a few seconds; entire depletion of the sinuses of the whole cavity being accomplished in about three minutes, the production of anæsthesia, as a rule, requiring a longer time.

The practical value of the use of the cocaine cannot, I think, be overestimated, for we possess no other remedy which can be depended upon to produce this result. The morbid conditions in which I observed its action, and in which it is of especial value, are as follows:

Hypertrophy of the nasal mucous membrane.—This is by far the most frequent cause of a nasal catarrh, and its rational treatment demands the use of caustics or other destructive agent. The use of any caustic is followed by an intense turgescence of the venous sinuses of the nose, which is a source of distress for hours, and even days, after its use.

I have cauterized the mucous membrane of the nose in twenty-seven cases since I observed the above-mentioned action of cocaine. The application was rendered comparatively painless by the drug, but the turgescence of the membrane came on in a few minutes after the caustic was used. By gently bathing the swollen part with the cocaine the turgescence subsided permanently, and the cauterization was accomplished without pain or the subsequent discomfort which so generally follows its use.

Another and very notable value of this action of the cocaine is as an aid to diagnosis in these cases of hypertrophy. In an ordinary case of this kind it is not possible to determine, on ocular inspection, how much of the swelling of the membrane is due to connective-tissue hypertrophy and how much is due to turgescence of the venous sinuses. By applying the cocaine to the membrane the element of venous turgescence is entirely eliminated, and the amount of genuine hyperplasia can easily be recognized.

Acute coryza.—In an ordinary cold in the head the prominent condition is the venous turgescence. I applied the cocaine in seven cases of the affection and in each case the same result was observed. The venous sinuses were completely emptied, and the nasal passages remained absolutely clear. The relief in five of these cases, which I saw subsequently, lasted from twelve to twenty-four hours. That is, in these cases the nose did not become "stopped up" again for from twelve to twenty-four hours, and then the relapse was only partial. The colds were broken up. For a cold in the head, then, cocaine, it seems to me, promises to afford us a remedy, which is not only prompt, but certain, and by prescribing it either in the form of spray or as a snuff, we can place in the hands of our patient a ready means of relief for that most distressing symptom of a cold, the "stopped-up nose.'

Nasal polypus.—The introduction of an instrument into the nasal passages usually causes a swelling of the membrane to such an extent as to seriously interfere with the inspection of the parts. In operating on four cases of polypus in the past week, this troublesome feature of the operation was entirely eliminated. The venous congestion was thoroughly kept down, and so clear a view into the upper regions of the nose was obtained that it was made a comparatively easy matter to recognize and remove even the smallest growths. But of still further importance was the fact that in no case was there other than the most trivial bleeding. In removing nasal polypi with the snare the troublesome bleeding is never from the mucous membrane, but from the venous sinuses which may be opened. In the four cases above mentioned, these sinuses were rigidly contracted by the cocaine, and hence the bleeding from the operations was but a trivial matter.

Hay fever.—The morbid condition of the nasal passages in an exacerbation of this disease is undoubtedly a turgescence of the venous sinuses, probably from a paresis of the vaso-motor nerves which are distributed to the coats of these vessels. I have had no opportunities of observing the action of cocaine in an acute exacerbation of hay fever, but I have applied it in two cases in which the symptoms were present to a mild extent. Both were cases of autumnal catarrh, commencing August 26th and lasting till the first frost. In each of these cases the result was the same. There was complete relief from all the symptoms.

The above-mentioned cases may not, perhaps, be conclusive as regards this action of the cocaine, but it certainly goes very far toward establishing its value. I used it in forty cases, all presenting marked swelling of the nasal mucous membrane, both from chronic and acute causes, and in every case the result was the same. There was an absolute and complete subsidence of the turgescence of the membrane and the sinuses were entirely emptied of their blood.

Among the observed symptoms of the internal administration of cocaine is the production of tetanic muscular contraction. The only explanation of its above observed action is that it produces the same action upon the muscular fibres which are found surrounding the venous sinuses which form the erectile tissue of the nose. Its action, it should be mentioned, is confined to the venous sinuses, for I have never observed that it exerted any influence upon the capillary circulation of the mucous membrane of any region. A tetanic contraction of the muscular fibres which surround the venous sinuses in the nose could only produce the condition I have observed,

for when the cocaine has had time to exert its action, the mucous membrane is seen to cling to the turbinated bones with a rigid clasp which can only be described as tetanic.

While, then, we have in the cocaine a local anæsthetic of very great value, I think we also have a therapeutic agent of inestimable importance, and which we have every reason to believe will be efficient, 1, to control the exacerbation of hay fever; 2, to relieve the most distressing symptoms of an acute coryza and curtail its duration; 3, to control the painful and distressing reaction which results from the use of caustics or instruments in the nasal cavity; 4, to completely empty the venous sinuses of the nasal mucous membrane, and thereby afford a thorough ocular inspection of the cavities; 5, to largely eliminate from our minor operations in the nasal cavities the troublesome hemorrhage which so often occurs, and to control epistaxis from whatever cause.

SOME NOTES ON HYDROCHLORATE OF COCAINE.

By N. J. HEPBURN, M.D.,

OPHTHALMOLOGIST TO THE DEMILT DISPENSARY, NEW YORK, ETC.

In the course of some experimental inquiries into the anæsthetic action of hydrochlorate of cocoaine, I observed some facts which may be of interest at this time.

A two per cent. solution of the salt (Merck's) was used in each instance, injected under the skin of the arm by means of a hard-rubber hypodermic syringe with gilded steel needle.

On October 16, 1884, I injected six minims of the solution at 7.30 A.M. In one minute and a half there was partial anæsthesia of the skin and subcutaneous cellular tissue for a space of eight lines in every direction from the centre of the injection. In four minutes the anæsthesia was complete over the same area, which was bounded by a hyperæsthetic line separating the anæsthetic portion from that of normal sensation. The injection was repeated every five minutes in adjacent spots with precisely similar results, until forty-eight minims had been used.

By this time the general physiological effects of the drug began to manifest themselves so plainly that it was deemed unadvisable to continue the experiment. These effects were increased frequency of the pulse, increase of one-fourth in the number of respirations per minute, an agreeable feeling of warmth, moderate mydriasis, slightly crossed diplopia, and agreeable hallucinations with closed eyes, which fancies disappeared when the eyes were opened. The power of locomotion was very slightly interfered with. These symptoms gradually disappeared, until, two hours after the last injection, nothing abnormal was noticed.

Two days later another trial of the same nature was made, when it was found possible to carry the number of six-minim injections to sixteen before the general disturbance became too marked to continue.

In a third trial, October 22d, using eight minims at each injection, it took sixteen injections also to produce the same toxic effect. On this trial the disturbances were more marked, and continued at least four hours, followed by a period of wakefulness lasting nearly all night.

The most noticeable of the sensations observed at this last trial were a general impairment of cutaneous sensibility, a feeling as if walking on cushions, a tendency to walk on the heels, and a sensation on grasping an object as if something spongy were interposed.

367 WEST TWENTY-THIRD STREET.

TWO THOUSAND DOLLARS FOR A BODY.—The daily papers mention a recent case in one of the Indiana courts where a medical college was obliged to pay $2,000 for having robbed a grave to secure the body for dissection. The name of the college is not given.

TRACHEOTOMY IN CROUP AND DIPHTHERIA.

By SIMON BARUCH, M.D.,

NEW YORK.

It is "a healthy sign of the times" when the discussion of worn and trite subjects of practical import occupies the minds of our profession, and when the search after novelties is for the nonce in abeyance. The subject of tracheotomy in croup and diphtheria has long been the theme of anxious and earnest inquiry. Its literature has grown to unwieldy proportions, as is witnessed by the fact that the library of the Surgeon-General's office contains five hundred and eighty-four separate treatises, upon the subject of tracheotomy in croup and diphtheria, occupying in their enumeration twelve and one-half columns of the index catalogue. The paper read recently upon this subject before the Obstetrical Section of the Academy, by Dr. Joseph Winters, presents an able, lucid, earnest, and logical defence of this life-saving operation. I am sure its careful perusal will serve to embolden the timid to advise and execute the operation more early and more frequently, and it will encourage the bold in pressing its advantages more persistently. I make this small contribution to the subject in order to elicit from practitioners in all sections of our country an expression of opinion. It is to be hoped that the interest in the subject will not be allowed to flag, as has so often been the case in its history, but that the practical tendency of the modern medical mind will keep it before the profession until its true merits are definitely ascertained and recognized. It will be the most important outcome of the present agitation of the subject, if general practitioners who in remote country districts and smaller towns frequently do other surgical work, can be persuaded that tracheotomy is not a hazardous operation, and that as a surgical procedure it does not require extraordinary skill or knowledge.

It is a sad, too sad fact, that precious time is often lost in the search for a surgeon; and that at other times the procedure is regarded by parents in the light of a capital operation, which handicaps their child in its struggle for life. These reasons operate in favor of delay until the operation becomes one of emergency. It is a fact to be remembered, that one successful tracheotomy for croup or diphtheria will do more to neutralize the groundless apprehension, in the minds of physicians and laymen, than all the statistics marshalled by high authority. As an illustration I will mention that two year ago Dr. Abram Jacobi performed a successful tracheotomy on a child in Carmansville, a suburb of this city, and since that time there is rarely an objection made to the operation. Within the past six months I have done it three times in that section of the city, and I cite these cases in order to illustrate the chief aim of this paper which is to emphasize the necessity for an early operation. On May 21, 1884, I was asked by Dr. William Frothingham to see a boy, three years of age, who had been under treatment for diphtheria for several days and was rapidly growing worse. The turpentine treatment, so much lauded in Germany, was advised and adopted, but without avail. Patient became cyanotic, and tracheotomy was adopted as a *dernier ressort*. By the light of a kerosene lamp, and amid the wailing of parents and friends, the gasping child was placed upon the table. He was so completely cyanosed that no anæsthetic was necessary. When the trachea was reached pulse and respiration ceased. The trachea was quickly opened, the tube inserted, and in a moment the inrush of air brought on cough and an expiratory effort. The color returned to the face, and the child revived, taking nourishment, which he had refused for many hours, because of his intense preoccupation with the struggle for breath. It was too late, however. The child expired in twenty hours.

To the second case I was called by Dr. Goodrich on September 10, 1884. A boy, aged seven, was discovered

during the night to be ill. When the doctor was called to him he made a diagnosis of naso-pharyngeal and laryngeal diphtheria. I saw him a few hours later, and confirmed the diagnosis. The breathing was stridulous, there was episternal and abdominal retraction, but no cyanosis; laryngeal stenosis was unquestionable. Tracheotomy was advised and readily assented to by the physician and the father of the child. Patient was etherized by Dr. W. T. Alexander; there was nothing unusual in the operation except the appearance of a great gush of venous blood when the trachea was opened, although the wound was dry. The incision was thus obscured, but by aid of a finger-nail it was found and somewhat enlarged. The tube was rapidly inserted and hemorrhage stopped promptly. This point will be referred to below. Patient received $\frac{1}{8}$ gr. bichloride mercury every two hours, and 10 ♏. tr. ferri, with 1 gr. chlor. potass., every hour, besides nutrients *ad libitum*. In eleven days he was sufficiently recovered to warrant the removal of the tube, and he is now in perfect health.

On October 7th I was asked by Dr. Goodrich to see another boy, also aged seven, and, like the last patient, in perfect health before the attack. This child had, however, been ill five days without treatment. Stridulous breathing alarmed the parents, who thought the child was simply suffering from a cold. When Dr. Goodrich was called he recognized at once the dangerous character of the malady and advised tracheotomy, to which the parents readily assented, because they were aware of the successful issue of the above-mentioned case. When I saw this patient he was not cyanosed, but there was stridulous respiration, and in all respects the case resembled the last mentioned, except in the longer continuance of the disease. The operation (under ether) was somewhat embarrassed by the deep situation of the trachea, a very large thyroid gland, and the presence of large veins coursing across the line of incision. The gland was drawn upward by a blunt hook, the larger veins held aside, one small vessel tied, and the trachea was now reached without difficulty. When it was opened it was so filled with diphtheritic deposit that the incision was bloodless and the knife grated as if passing through the soft rind of a melon. It is to me a marvel how this child breathed through so narrow a channel without being markedly cyanosed. The tube was readily inserted. Patient revived, countenance became calm and bright, pulse more quiet and regular. But it was too late; he died on the following day from asthenia.

These three cases show clearly the vast advantage of an early operation. The last two cases were circumstanced precisely alike, being of the same age, and in the same social grade, but the one was operated upon very early, the other very late. Statistics have again and again demonstrated the value of an early operation; common-sense is thus aided by experience. It is criminal to wait until cyanosis hangs out the danger signal. Aphonia, stridulous voice, and respiration, the distended nostrils, the heaving chest, and appealing eye point unerringly to the speedy advent of carbonic oxide poisoning.

The patient is dying from asthenia, and threatened with carbonic oxide poisoning in addition. We are pouring stimulants, nutrients, and tonics into his stomach with a view to avert or counteract asthenia. So assiduously is he "supported," that he is often scarcely allowed to sleep. Of what avail are all our "supporting measures" when he is slowly approaching strangulation, when the respiratory passage is encroached upon more and more every moment, so that he cannot obtain sufficient oxygen to carry on the machinery of life? I take it that oxygen is *facile princeps* among stimulants; it is the great life-saving principle, the grand protecting ægis against disease and death. All our energies in sanitary medicine are bent in the direction of increasing the supply of oxygen to our dwellings, schools, prisons, etc.; all our best efforts in the hygienic treatment of many of our patients are in the direction of increasing the amount of oxygen in their lungs. Why, then, stand idly by when in diphtheria our little patient is hour by hour robbed of the all-important element? How absurd it is to supply artificial stimulants while nature's great stimulant and sustainer is withheld! The patient prays for air, and we give him milk and brandy; "he asks for bread, and we give him a stone." It cannot be too earnestly urged upon the practitioner that it is his duty to watch as anxiously for, and guard against, the oncoming of the threatening air famine (carbonic oxide poisoning) as it is to watch and guard against the approach of the food famine (asthenia). Just as we increase the stimulants, when the pulse flags, just in the same measure should we increase the oxygen when the respiration flags. Indeed it is an accepted axiom of physiology that man can exist far better with a limited supply of food than with a limited supply of oxygen. And yet physicians hesitate when they clearly see the advent of cyanosis and consequent asphyxia in these cases. He who hesitates is lost, and will sadly regret his indecision.

Especially is it the duty of the attending physician to operate early on the first indication of abiding laryngeal stenosis, when he recognizes the fact that tracheotomy is really not a dangerous operation. From a somewhat extensive experience I may be permitted to state that tracheotomy in children is rarely followed by shock or accompanied by hemorrhage, which latter is readily stanched by pressure forceps, *serres-fine*, or ligatures. It is an operation which may be performed without difficulty by an ordinarily steady hand and cool head. Hence it does not, in my opinion, as a surgical procedure, enhance the patient's danger, if undertaken early. When I lived in the South I was often consulted for foreign bodies in the air-passage. These were sometimes grains of Indian corn, but most commonly they were the seeds of the watermelon. This fruit is largely cultivated in the section of South Carolina in which I resided. The country people regard it as so harmless that children of very tender age even are permitted to partake of it. Every farmer has "a patch of melons;" hence their use is universal. It is not uncommon, while riding through a plantation in midsummer, to see a little negro child sitting or lying near a big watermelon, and with its tiny hands digging out the juicy mass and stuffing it into its mouth. The result is that these babes, as well as older children, white and colored, occasionally "get the seed into the wrong throat," and are brought to the physician. The history of such cases of "croup" is usually clear. Rarely did a summer pass, during my practice of fifteen years in that section, without one or more cases of this kind being brought to me by the parents, or sent by country practitioners.

With the exception of one case, the removal of the foreign body was always advised and executed. Under chloroform I have never found the operation presenting serious difficulty; the foreign body usually presents itself at the tracheal incision, or is expelled into the room with the strong expiratory effort which always follows the latter. The wound is closed and heals within a week; there is usually no shock, no fever, and the only trouble I have encountered is a slight dysphagia on the third and fourth days. I can recall only one fatal case of this kind, a negro boy, sixteen years of age, in which the nature of the foreign body was unknown and was not found. My friend, Dr. T. T. Robertson, of Winnsboro, S. C., has obtained quite a reputation as an operator for watermelon and corn-seeds, having done tracheotomy many times successfully. It cannot be denied that the presence of a tube in the trachea seriously complicates the case, but the advantage of a new and perfect air-channel counterbalances this evil.

The manual of the operation differs somewhat in the hands of different surgeons, and it is well for the novice to obtain all the information he can on the "points" which experienced operators give. It is important to strike the junction of the sterno-hyoid muscles, and avoid cutting

into the muscular fibres. If the latter happens, the operator will find it difficult to reach the trachea, and there will of necessity be a larger wound surface and more hemorrhage. To obviate this difficulty I invariably divide the cervical fascia upon the grooved director, and never attempt to enter between the sterno-hyoid muscles *from above*. Placing thumb and forefinger upon either extremity of the sternal manubrium, the median line is easily obtained, the handle of the scalpel readily enters between the muscles as they lie separately attached to the sternum. Upward pressure with the handle acts as a wedge to separate them. The wound should be as dry as possible ere the trachea is opened, all vessels being secured. When the incision, which should be ample always, is made into the trachea, the supreme moment of the operation arrives. There is a struggle and an ugly gurgling of air and blood, which readily disconcert the novice. At this moment the surgeon should be calm, and steadily press on to the goal—the insertion of the tube. If blood wells up from the wounded trachea or from unseen veins, the operator should not stop to stanch the hemorrhage. The tube is the best hæmostatic agent, and through its unyielding channel portions of membrane and blood are more readily expelled or drawn than through the tracheal wound, held open by retractors. I am sure that lives have been lost in the effort to check the hemorrhage here referred to, and by delaying the introduction of the tube.

The after-treatment should be vigorously pushed by constitutional measures and local inhalations of moist air. It is a too common practice to fill the room with vapor and exclude the air. The patient needs a moderately warm and moist atmosphere, but *he needs oxygen more*.

43 East Fifty-ninth Street, October 24, 1884.

CEREBRAL LOCALIZATION—THE CENTRES FOR VISION.

By PHILIP ZENNER, A.M., M.D.,

cincinnati, o.

(Continued from p. 460.)

SOUL-BLINDNESS.

When Munk[1] removed the central part of the visual area of dogs he produced a condition which he termed soul-blindness. The animals, though evidently retaining the sense of vision, no longer recognized familiar objects. He supposed their brains to have been robbed of that part in which were stored up the visual images gained from past experience, and that they were, therefore, in the condition of new-born, who see but do not know what they see.

A few words of explanation are necessary to express Munk's views more fully.

An image formed on the retina makes an impression upon the visual area of the brain and is perceived. If, at the same time, the attention dwells upon this image it leaves an impression upon the brain which remains, perhaps permanently. Now if the object is seen again it is compared with this retained visual image and thus recognized as seen before. This retained or memorized visual image may now be brought up in the mind without the external presence of the object, it may appear in the fancy or imagination, or be utilized in thought.

These memorized images are probably received and stored up where the visual impressions themselves are received, that is in the visual areas. But Munk believes that they are stored up in the central part of the visual area, in relation with the central part of the retina, and that when this central part is removed the memorized images are lost also. He believes those images are usually stored up in the central part because for memorizing anything the act of attention is always necessary. Ordinarily attention is only paid to images which fall upon the central part of the retinæ; therefore, according to Munk, memorized images are only stored up in the central part of the visual areas.

Mauthner,[1] on the other hand, believes that Munk's soul-blindness is altogether due to impaired vision, that his dogs do not recognize objects because they do not see distinctly, and that the effects would be altogether the same whether the central parts of the retinæ or the central parts of the visual areas were destroyed.

The difference between these views should be distinctly recognized. Mauthner also believes that the retained visual images reside in the cortex, but he believes that the seat of these images is coextensive with vision itself, whereas Munk believes that, while the whole visual area is devoted to vision, some images are stored up, retained, or memorized in one part of it, some in other parts, and that such images may therefore be lost, while the sense of vision is retained.

Were we only concerned with conditions experimentally produced in dogs, I would not have dwelt upon this matter here, but similar conditions have, of late years, been observed in man, and the subject has obtained, apart from its great theoretical interest, a certain practical value.

SOUL-BLINDNESS IN MAN.

A few years ago Fürstner first reported such cases. Others of a similar character have since been recorded. All of them were cases of general paralysis. The visual disturbances in every instance followed paralytic attacks (apoplectic or epileptic in character), and disappeared again in part or altogether within a few days or weeks. In some instances the mind was so clouded that the observations can scarcely be utilized for scientific purposes; in others the mind was sufficiently clear when the observations were made to give the latter an undoubted value.[2]

A few illustrative cases will now be given. In Fürstner's first case,[3] after an epileptiform seizure with loss of consciousness, a right hemiplegia of several days' duration was found, also a deviation of the eyes to the left, which was of two weeks' duration. A few weeks after this seizure, when the mind was completely clear, it was observed that patient recognized objects with the left eye, but did not appear to see with the right one. At least he did not recognize objects with the latter, and objects brought suddenly before it did not cause any reflex movements, winking, etc. At the same time the pupils responded to light and the fundi oculi were normal.

His vision improved, and it was now noted that when he tried to grasp an object in the hand of the physician he moved his head from side to side, then seizing the arm of the physician, followed it until he reached the hand. He could not count objects without touching them. Often in attempting to touch objects he reached beyond them. In counting small objects he often overlooked some, or counted the same one repeatedly. In counting he would move his head constantly from side to side. At a later period he could recognize small letters, but if the letters were combined to form a word he could neither read the word nor point out the separate letters.

The patient's mind was quite clear and he was repeatedly and carefully examined. It was explicitly stated that there was neither color-blindness, contraction of the field of vision, hemianopia, nor binocular diplopia.

These visual disturbances had almost disappeared when the patient had other paralytic attacks and died shortly afterward. A focus of softening was found in each occipital lobe.

In a number of cases Fürstner observed similar visual disturbances. They always followed paralytic attacks,

[1] See second paper.

[1] Gehirn und Auge, p. 487.

[2] It has been attempted to utilize these cases, especially those of Fürstner, in certain questions of localization, but there are various reasons why they do not answer for this purpose, and that aspect will not be considered here.

[3] Archiv f. Psychiatrie, viii., p. 165.

but usually disappeared in a much shorter time than in the above case. But these peculiar visual symptoms are even more marked in some cases reported by Stenger.[1]

In Stenger's cases both eyes were equally affected. I will briefly relate the two most interesting ones.

In the first, in whom there was already a degree of dementia, there occurred paralytic attacks every four or six weeks, with some elevations of temperature and convulsions, chiefly on the right side, followed by transient right hemiplegia. Following each attack there were disturbances of speech, with a condition termed word-deafness, and the peculiar visual disturbances we are about to mention. The patient could see a chair which was in his way, but only avoided it after having once stumbled over it. Fire brought close to his eye did not frighten him. He touched it to find out what it was, and only then avoided it. He could see wine, but seemed not to know its use until it was brought to his lips.

There appeared to be no contraction of the field of vision, for objects brought from any side were immediately perceived. Fundi oculi were normal. The disturbance both of speech and vision remained for about ten days when they gradually disappeared, but after each such attack a number of words and visual images seemed to be permanently lost. The post-mortem examination revealed the diffuse changes in the brain commonly found in general paralysis.

In another case, after a paralytic attack the patient recognized some objects through the sense of vision, while he did not recognize others. Thus, he recognized his bed, fire, and bread, but not a needle, shoes, or his clothes. But (just as in the case of Munk's dogs) he learned to know a needle by its mere appearance after being taught what it was by means of other senses.

The last case I shall mention is one reported by Zacher,[2] in which a paralytic attack left the patient with difficulties of speech, and motor and sensory disturbances, and the same kind of visual symptoms. Though paralytics generally seize food very greedily, this patient left it untouched until put in his mouth. He was very fond of cigars, but he now took one in his hand and again laid it aside, apparently not knowing its use. These visual disturbances were present only a few days.

It is by no means easy to determine the exact character of the visual disturbances in the above-mentioned and similar cases. The difficulty is increased by the fact that in all of them there was a degree of mental weakness, and in some well-marked dementia. It is quite probable that in all of these instances there was some impairment of vision, and that impaired vision alone can produce somewhat similar disturbances seems to be proven by two cases of Wilbrand.[3] In both of these instances the patients became suddenly unable to recognize objects about them, their own houses, streets in which they resided, etc. They could not, therefore, find their way in the streets, though they continued to see. Both patients were sound mentally, and in each a homonymous lateral hemianopia was subsequently found.

In the above cases, also, blindness or impaired vision in parts of the retina is very probable. In the first case of Fürstner the manner of seizing an object, the constantly moving the head from side to side in trying to count, and overlooking some objects while counting others repeatedly, seem to point with great certainty to spots of retinal blindness. It is true that the patient was carefully examined by skilled physicians and that color blindness, hemianopia, etc., were excluded, but slight disturbances can be overlooked even on careful examination. This fact is well illustrated by a case of Wernicke[4] in which an eminent ophthalmologist could find nothing abnormal, though relative scotomas were afterward detected, certain parts of the retina being still sensitive to light, though the acuity of vision in some parts was diminished.

But if it could be determined that in all cases of so-called soul-blindness there is impairment of vision, this would not necessarily explain the complex of symptoms. The condition may, nevertheless, be found in them which Munk claims to be present in his dogs; that is, in addition to a degree of retinal blindness, and quite independent of the latter, a loss of cerebral visual images which in itself explains the symptoms.

There is, in fact, much which points toward the correctness of such an explanation. In many of these cases there were at the same time disturbances of speech, especially that condition termed word-deafness, where those peculiar conditions appear to be positively determined with reference to hearing whereof there is now question as to the sense of vision; for, in these instances, without having lost the sense of hearing the patients do not comprehend what they hear.

It is also a singular fact that in almost all cases of "soul-blindness" the left side of the brain was affected, which, as we have been taught by other clinical observations, seems to be the seat of the highest cerebral functions.

The existence of a condition termed word-blindness, where written and printed words cannot be read, a condition not infrequently found, and also present in some of the above cases, strengthens the belief that certain visual images may be lost while vision is retained. Yet it must be acknowledged that what has as yet been contributed is not sufficient to decide this difficult question, and its solution must be left, like that of some other questions with which we have dealt, to future investigations.

Diagnosis.—We must now consider the practical aspect of our subject, the value of the visual disturbances of which we have spoken, especially hemianopia, in diagnosis.

When carefully sought for hemianopia is not infrequently found in cerebral disease, especially in those cases where the disease is ushered in by an apoplectic attack. Hughlings Jackson[1] found hemianopia in quite a number of cases of hemiplegia, and Gowers[2] states that he never fails to find hemianopia in hemiplegics when he looks for it at an early period. But in the latter case this symptom has a local significance. A sudden hemiplegia is usually caused by a cerebral hemorrhage or the plugging of a vessel, conditions which produce a temporary paralyzing effect upon the entire brain, or at least upon one hemisphere. Hemianopia produced at such a time need not indicate any direct involvement of the visual centres. In the same way a hemorrhage in the occipital lobe may cause hemiplegia, though this part of the brain has no motor functions. It is these distant effects, produced by sudden lesions, which, when not properly estimated, bring confusion into the study of cerebral localization. The clinical manifestations, hemiplegia, aphasia, hemianopia, etc., which are present only a short time after an apoplectic attack, are usually valueless in assisting to localize lesions. Only permanent symptoms have a local significance.

If, now, hemianopia be a permanent symptom, it indicates that there is a lesion of some part of the visual apparatus, but it gives us no knowledge of its more exact locality. We have learned that lesions of the optic tracts, of the occipital lobes, and of the parts connecting the two, may cause hemianopia, and must now seek for other means to determine more precisely the seat of disease.

There are a few special symptoms which may be of value for this purpose. The first is the condition of the pupils. Disease of the occipital lobes has no influence on the contraction of the pupils. When both occipital lobes are destroyed, and there is complete blindness, the pupils continue to respond to light. But if the blindness be of peripheral origin, due to degeneration of the optic nerves or tracts, the pupils cease to respond to

[1] Archiv f. Psychiatrie, xiii., p. 225.
[2] Ueber Hemianopsie, pp. 172, 176.
[3] Ibid., xiv., p. 488.
[4] Gehirnkrankheiten, ii., p. 552.

[1] Ophth. Hosp. Reports, viii., p. 330.
[2] Brit. Med. Journal, November 24, 1877.

light. Nevertheless, in cases of hemianopia this difference in reaction of the pupils is of little consequence, because one-half of the retina is still sensitive, and the pupil will respond, no matter whether the injury to one-half of the visual apparatus be central or peripheral. But Wernicke believes that, even with these unfavorable conditions, with proper care and skill we can gain something from this symptom. This is to be done through allowing light to fall upon only one-half of the retina by means of proper apparatus. Wernicke mentions a case[1] where he censures himself for having neglected this means of arriving at a correct diagnosis. The case was one in which there was double hemianopia, therefore complete blindness. The pupils responded to light, and the diagnosis was, consequently, disease of both occipital lobes. The *post-mortem* revealed disease of only one occipital lobe. The second hemianopia was caused by the compression of the optic tract of the other side. Wernicke believed that he could have arrived at a correct diagnosis had he tested the pupils by throwing light upon only one-half of a retina at a time. On account of the difficulties and perhaps unreliability of such examinations we may be permitted to believe that they will never be of much practical value.

The ophthalmoscopic appearance of the optic disks may also assist us to distinguish peripheral from central disease. The object of the examination is to determine whether or not there is any atrophy of the optic nerves. Peripheral disease is more frequently and more quickly followed by such atrophy than central disease, so that the early appearance of discoloration of the disks makes the existence of peripheral disease probable.

These symptoms, then, though they have an absolute worth, are practically of little value. As in cerebral lesions elsewhere located we must base our diagnosis upon the history of the case and the whole complex of symptoms. The mention of two cases will serve for illustration.

The first, a man sixty-eight years of age, observing a defect of vision consulted an ophthalmologist, who found a left hemianopia. There was no other symptom at this time, and the patient continued to attend to his business until two weeks before I saw him, when his wife sent for the family physician, because there seemed to be some change in his mental condition, loss of memory, etc. When I saw him there was complete blindness in the left half of the field of vision, and the patient saw but very little in the right half; there was double hemianopia. There were no changes in the fundus of the eye and the pupils responded to light. There were no other localizing cerebral symptoms. His only other were mental symptoms. He was forgetful of recent occurrences, more emotional than normally, and was occasionally confused as to locality.

The diagnosis was, degenerative changes in both occipital lobes, probably due to thrombosis in the posterior cerebral arteries. The disease involved the visual apparatus of both sides. It was not a double peripheral lesion, or the pupils would not respond to light. It was not like the above case of Wernicke, in which one lesion (a tumor) destroyed one occipital lobe and compressed the opposite optic tract, because everything was opposed to the presence of an extensive lesion of this character. The mental symptoms indicated that the cortex was affected. From the fact that there were so few symptoms, we may judge that the cortex was directly involved in the lesion, and not indirectly affected by a large lesion in a distant part.

All above said only permits us to conclude that one occipital lobe is the seat of disease. It could not be denied that the hemianopia of one side might still be due to peripheral lesion. But it is probable that in the latter instance also the disease is central, not peripheral.

The second case, a man sixty-six years of age, has had right hemianopia since seven years ago. At that time he had a sudden seizure without loss of consciousness—he cannot recall details at this time—after which he was confined to bed for a month. He thinks that he was not paralyzed, but inasmuch as he was confined to his bed for a month at least, a hemiparesis was probably present. An examination by an ophthalmologist, made four months later, revealed a right hemianopia, which did not reach quite to the point of fixation. There was slight improvement within the next year; the field of vision of both eyes became a little larger.

Some months ago his vision again became suddenly worse, probably due to an attack of the same kind as the first one. At the present time there is a right hemianopia reaching, apparently, to the point of fixation, though, on account of the restless condition of the patient, its exact limits can not be determined with certainty. The pupils respond to light. The ophthalmoscopic appearance is normal. There are no other cerebral symptoms, but the patient says he is able to do far less mental work than before the last attack.

This patient has valvular disease. The diagnosis is embolism of the left posterior cerebral artery. But the diagnosis is only a probable one. It is based upon the probable extent of lesion, the absence of other localizing symptoms, and the mental impairment.

Bernhardt[1] reported a number of cases a few years ago, where, in addition to hemianopia, there were transient affection of sensation and motion, and occasional unilateral convulsions on the same side. The clinical picture in these cases suggested the presence of degenerative changes, especially in the surface of the brain, extending beyond the limit of the occipital lobes. They remind us of Westphal's case, where the autopsy revealed changes limited to the cortex.[2]

It is needless to speak further of individual cases. The above instances are sufficient to indicate how a diagnosis is arrived at, and they illustrate another fact, that the diagnosis is often problematical.

It may appear to one who has carefully read these papers that the laborious and diligent application, and the profound research which have been devoted to this subject, though they have done much to enrich scientific knowledge, have added little to our powers of curing disease and alleviating human suffering. And, at present, such a view has much to substantiate it, though the case of Wernicke and Hahn affords a brilliant illustration of what can already be done in cerebral surgery. But knowledge of cerebral localization is of very recent date. Advances are constantly being made, and it is only reasonable to believe that far more exact diagnoses will readily be made in the future. Therapeutic appliances are also becoming better understood and more valuable, and especially are radical surgical operations performed with a degree of safety not formerly dreamt of.

With such favorable indications before us we are not over bold when we venture to state that the knowledge of cerebral localization will yet be the source of great practical benefits to mankind, that it will ofttimes enable the physician to cure those diseases which are of all the most appalling, for they not only shorten life and entail great suffering, but also threaten the afflicted with the loss of reason.

Trichlorated Phenol in Erysipelas.—At a recent meeting of the Surgical Society of St. Petersburg, Dr. Papow communicated the results of his experience with this form of phenol as a local application in erysipelas. The author reached the conclusion that the drug arrests the development of, or destroys, the micro-organisms upon which the disease is supposed to depend. He advised its application in a ten-per-cent. solution, to be brushed over the diseased part and the adjacent skin.—*Gazette des Hôpitaux.*

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[1] Gehirnkrankheiten, ii., p. 335.

[1] Archiv f. Psychiatrie, xii., p. 780.

[2] See third paper.

HISTORY OF A CASE OF FISTULA IN ANO ACCOMPANIED WITH INCONTINENCE OF URINE OF SEVERAL YEARS' STANDING.

By MORRIS H. HENRY, M.A., M.D., LL.D.,

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I BELIEVE in the records of clinical contributions that speak for themselves, written in such a way that they need little or no commentary to explain their meaning or add to their interest.

CASE.—Mrs. ——, about thirty years of age, married about ten years, in affluent circumstances, has children, is of full habit and to all outward appearance perfectly healthy. I was called to her by the advice of her medical attendant, at her summer home, some distance from New York, in June, 1883. She had been under the especial care of a New York physician during the summer of 1882, who made his home at a hotel in the immediate vicinity of her then country residence, but a short distance from New York. His "specialty" was diseases of women, and he was selected to attend her on that account. He made what he termed a "careful and thorough examination, and discovered an inflammation and ulceration of the os and cervix uteri, which accounted for all her distress and annoyances." Her main suffering, from her own account, was an intensely irritable condition of the bladder, constant desire to micturate, and severe pain in the rectum at every fœcal discharge. This had existed for more than ten years. She remained under the care of the gynecologist during the summer of 1881 without deriving much benefit. He was retained as her medical adviser, and was with her during her confinement, in the spring of 1882, with her fourth child. She made a good recovery from the birth of the child, but she still suffered from distress in the region of the rectum and the unceasing annoyance of incontinence of urine.

Such is the history of the case, in brief, afforded me June 26, 1883, when I was called to attend her. The local physician did all in his power to relieve her of pain until my arrival. She complained of a severe and intense throbbing pain in the region of the rectum, which had been steadily increasing during the past four days. The incontinence of urine had increased—she had, in fact, no control over the bladder. She had had no passage from the bowels for three days, and was averse to making any effort from fear of an increase of pain. The recent death of her father from fistula in ano and perineal abscesses added to her mental anxiety and suffering.

On examination I found a circumscribed, deep-seated inflammation, about three inches in diameter, on the left side of the rectum, the external border close in and involving the external sphincter of the rectum. There was a little oozing from the centre of the inflamed mass. I made a free incision and relieved her of about four ounces of pus. With the aid of a Sims speculum and a probe I discovered two fistulous openings in the rectum, one extending about two inches upward from the border of the anus, and the second not quite as far, both communicating with and terminating in the external abscess. By inserting a probe in each track the figure V was described, with the pointed end in the abscess. In deference to her wishes, owing to the appearance that morning of her menses, there was no further surgical interference that day. The wound was dressed with warm fomentations and the bowels relieved with mild enema. She was freed from the acute pain and the incontinence was lessened.

July 10, 1883, assisted by the local physician, who administered a little chloroform, I laid open the two fistulous tracks, cleansed the parts with a solution of labarraque, and dressed the wound with iodoform and vaseline. As soon as she had recovered from the effects of the chloroform—about three hours after the operation—ten grains of quinine and half a drachm of tincture of hyoscyamus was administered. A few hours of refreshing sleep soon followed. For the first time in many years she was able to retain her water many hours. The irritable condition of the bladder had ceased. The wound was dressed twice daily in the usual manner to induce healing from the lower surfaces.

July 17th.—The wound had entirely healed within the rectum, and a few days later it had done so along its whole course. There were no more painful or abnormal sensations about the rectum. The bowels yielded to gentle enema, and there was no longer any incontinence. I heard from her a few days ago—October, 1884. She was perfectly well.

I have now only to add that I believe this is not an isolated case. I record it with the hope of attracting attention to diseases of the rectum as a fruitful source of "diseases of the bladder and uterus" due to reflex causes. I have no doubt there are many persons suffering in a similar manner, without identification of the nature of the disease on the part of medical attendants.

581 FIFTH AVENUE, November, 1884.

NATURAL SULPHUR-WATERS, AND THEIR THERAPEUTICAL APPLICATION.

By HOWARD PINKNEY, M.D.,

NEW YORK.

DURING two summers spent in Europe visiting a few of the most noted spas, my attention was attracted to the large proportion of Americans there seeking relief for various ailments. I inquired of many why they came so far? also if they had ever tested the virtues of American springs? The usual answer was that "they had come by the advice of their physician," and that, with few exceptions, "they had never visited for treatment any springs at home." I have conversed with many of our eminent physicians and surgeons, and find that while they are quite familiar with the properties of European medicinal waters, they have paid but little attention to those in this country. Dr. Walton, in his work on the mineral springs of the United States and Canada, describes over one hundred and ninety sulphur springs in the United States; and Dr. Glover describes thirty sulphurous or sulphuretted spas in Europe. In comparing the analyses of these different sulphurous springs it will be found that all so-called springs contain certain ingredients in common, and differ mainly as to the proportion of these ingredients in each, and the temperature of the water as it issues from the sources. In order to satisfy myself as to some of the therapeutic effects of sulphurous waters, I spent three months at Sharon Springs. While there I had the good fortune to watch its effects in the following diseases, viz.: Rheumatism and gout, acute and chronic, eczema, psoriasis, nasopharyngeal catarrh, catarrhal inflammation of the Eustachian tube causing deafness, and one case of hemiplegia. In all the cases of rheumatism and gout seen before commencing the use of the waters, the secretions, viz.: urine, perspiration, and saliva, were excessively acid. After taking the baths and drinking the waters for a week or ten days, I found the secretions much less acid; after the fourth week of their use, in many cases little or no acid showed by the blue litmus paper test. In the cases of eczema the same result was shown. In one of two cases of psoriasis the eruption disappeared entirely after one course of baths. In the other, who only took the baths, etc., for two weeks, no improvement was perceptible. In the case of hemiplegia, where the baths and water were used most faithfully, I could detect no improvement in the paralyzed parts, although the general health and appetite improved.

As sulphuretted hydrogen gas is so freely generated in the bowels and expelled by the rectum, I at first thought that its introduction into the stomach, especially in cases

of dyspepsia, would be injurious. I therefore advised that the water should be first heated, in order to throw off the free sulphuretted hydrogen before being drunk; but, as many visitors, who, for years, had been in the habit of coming to Sharon, informed me that, whenever they had dyspepsia symptoms—especially acid stomach—they always found relief by taking a glass of the sulphur-water as it came from the spring, I could not doubt their testimony, and the following questions suggested themselves: Does sulphur-water prevent fermentation outside the body? If so, does it have the same effect in the stomach? To solve the first question, I made the following experiment: Taking two glass test-tubes of equal size, I partly filled one with sulphur-water taken directly from the spring. In the other I placed an equal amount of rain-water. To each I added an equal amount of ferment, composed of molasses and baker's yeast, corked and labelled each, and set them aside in a warm place.

On the following day, when I examined them, I found that the cork in the test-tube containing the rain-water had been forced out, and that the fluid in the tube was turbid and covered with a luxuriant growth of yeast plant. The other tube, containing the ferment and sulphur, appeared the same as when I set it aside—the cork was firmly in the tube, and no growth appeared on the surface of the liquid. I repeated this experiment with tank-water, and the water used at the table for drinking, with like results—the sulphur-water always arresting fermentation. I naturally came to the conclusion that if sulphur-water prevented fermentation outside of the body, it might have the same effect in the stomach. Now, if this theory is correct, may not some similar change take place in the blood of rheumatic and gouty patients, and account for, in a measure, the marked improvement in such cases from the use of the waters?

As I was anxious to make some investigations as to the effect of sulphur-spray upon inflamed mucous surfaces, I had an excellent opportunity of doing so, and also the effect of breathing and inhaling an atmosphere highly charged with sulphuretted hydrogen. In connection with the baths are three inhaling-rooms. In the first the sulphur-water is converted into a spray by means of compressed air, and so arranged that it can be applied directly to any part of the throat or nose. In the second room the water is converted into spray by steam and completely fills the apartment. In the third room the water, as it comes from the spring, is mechanically broken up and the sulphuretted hydrogen set free by a series of fountains. The air of this room is constantly charged with an excess of sulphuretted hydrogen and can be freely and safely inhaled. All the cases of catarrhal inflammation that I had an opportunity of watching received marked benefit from this mode of application. The beneficial effects I think result from the following causes: First, the steam spray softens and relaxes the inflamed mucous surfaces; second, the compressed air spray cleanses and stimulates to a healthy action the surfaces with which it comes in contact; third, the breathing of air charged with sulphuretted hydrogen gas has an anodyne and somewhat narcotic effect. Physicians who are in the habit of using the spray frequently have added to the sulphur some medication, as benzoic and boracic acids; some preparations of the pine, as the extract or oil made from the needles or leaves of the pine, such as are used so largely in Germany in similar affections. The object that I have in view in writing the above is, to stimulate a more thorough research into the medicinal properties of the almost numberless medicated springs in the United States, thereby enabling physicians intelligently to advise their patients in regard to the various springs, at the same time sparing them the many inconveniences of sea and continental travel, especially should they be lame or crippled.

24 East Forty-first Street.

Reports of Hospitals.

ST. LUKE'S HOSPITAL, NEW YORK.

Irrigation of Stomach for Chronic Gastritis.

Reported by SAMUEL T. KING, M.D., House Physician.

The almost uniform success that has been obtained during my term of service by irrigation of the stomach, or lavage, for chronic gastritis (gastric catarrh), is my apology for publishing the results of treatment in the following cases.

The method of lavage, as performed at the hospital, is very simple. The patient is instructed to take no breakfast. At about 10 A.M. the stomach-tube is introduced and the stomach is washed out several times by the aid of siphonage. The apparatus used consists, first, of a quite flexible rubber tube from one-third to one-half an inch in diameter, about twenty-eight inches in length, one end being freely open and the other closed, rounded, and with one oval aperture on each side; second, of an ordinary black rubber tube three feet long, attached by means of a short glass tube to the stomach-tube first mentioned; third, a small funnel. The temperature of the water used varies from 100° to 110° F. In two or three quarts of this water is dissolved a teaspoonful of borax. The amount of water tolerated is judged by the subjective sensation of fulness, and it varies considerably with each case. The stomach is washed out until the returning fluid becomes quite clear, usually three or four washings proving sufficient.

After introducing the tube a little beyond the root of the tongue, the patient is instructed to swallow, and at the same time the tube is pushed somewhat rapidly into the stomach. Occasionally at the first introduction there is considerable difficulty from retching, but by proper manipulation this may be readily overcome. After three or four introductions the patient himself will be able to introduce the tube.

The following are abbreviated reports of all the cases of chronic gastritis which have been treated by lavage during the past year.

Case I. (*Services of Drs. Beverley Robinson and Francis P. Kinnicutt.*)—Robert W——, seventeen years of age, native of the United States, errand boy, was admitted to the hospital November 9, 1883. Two years before entrance he first began to have pains in abdomen, and soon after vomiting began. Had no hæmatemesis. At time of entrance he was in a truly pitiable condition, his stomach rejecting nearly everything. He was rapidly emaciating. Skilled treatment by drugs had failed to relieve him. Upon entrance, physical examination revealed dilatation of the stomach. Lavage was immediately commenced, and for the first few days the boy was nourished entirely by nutritive enemata. On November 22d he was placed upon small quantities of pancreatized milk by the mouth, given at short intervals; and from that time his diet was gradually increased, with the exception of one interval of a few days, when there was a return of the vomiting, until he could eat any form of nitrogenous food, and, finally, any kind of food. During the treatment by lavage he was given several drugs to prevent emesis and putrefaction, but apparently without any especial benefit. Patient had no more vomiting after December 22d. The lavage was reduced to every other day January 20, 1884, and entirely discontinued at the end of another month. From January 1st until date of discharge, February 19th, patient gained eighteen pounds in weight. From that time to the present date, October 22d, there has been no return of gastric symptoms.

Case II. (*Service of Dr. George G. Wheelock.*)—Louisa H——, colored, thirty (?) years of age, a domestic, was admitted to the hospital March 15, 1884. For a month previous to entrance patient had been vomiting

after eating and had suffered epigastric pain and distress. On entrance there was anorexia and rather persistent vomiting, and she gave a distinctly phthisical history. Physical examination revealed very slight pulmonary changes. Having obtained no satisfactory results from medicinal treatment, April 22d the patient was ordered lavage every day and strictly milk diet. The gastric symptoms were entirely relieved, and on April 30th she was allowed some nitrogenous food. On May 10th, because of some irregularity in diet, she again began to vomit, and although two or three trials were afterward made to confine her to a restricted diet, she was unable to restrain her appetite for forbidden articles of food, and was therefore discharged June 3d, materially improved in her gastric symptoms.

Case III. (*Service of Dr. George G. Wheelock.*)—Catharine T——, forty-six years of age, married, a cook, was admitted to the hospital April 15, 1884. She has always been a hearty eater, and occasionally indulges in malt liquors. Three weeks before entrance she began to vomit a greenish (bilious?) material, and for the last week the vomiting has been persistent. Patient has sour eructations, vomiting of a sour fluid, and tenderness and sensitiveness over abdomen, especially in epigastric region. Bowels are constipated. Medicinal treatment failing to give relief, she was ordered lavage and milk diet. She was discharged June 11th, having entirely recovered from her gastric symptoms. May 22d was the date of the last vomiting.

Case IV. (*Service of Dr. George G. Wheelock.*)—Geraldine E——, colored, thirty-two years of age, married, a domestic, was admitted to the hospital April 28, 1884. She has had frequent vomiting and headaches. She often vomits large quantities, and at times particles of food which she had eaten four or five days previously. Upon entrance, physical examination revealed marked dilatation of the stomach. Lavage with the usual precautions was ordered, and patient was discharged cured May 31st. She was seen during the latter part of the summer, and at that time there had been no return of her gastric symptoms.

Case V. (*Service of Dr. Francis P. Kinnicutt.*)—Eugene F——, twenty-two years of age, single, native of the United States, a tinsmith, was admitted to the hospital June 25, 1884. For the past year he had suffered from eructations of gas and a sour fluid and constipation, and had obtained no relief from skilled medical treatment. Has lost but little flesh and strength. Under treatment by lavage, with pancreatized milk as diet, his gastric symptoms were markedly improved but not entirely relieved.

Case VI. (*Service of Dr. A. Brayton Ball.*)—Matilda N——, thirty-three years of age, dressmaker, was admitted to the hospital August 30, 1884. She was suffering from chronic bronchitis and asthma. She had also suffered from sour eructations and occasional vomiting for some time previous to entrance. Her cough ceased under treatment, but she suffered from alternating diarrhœa and constipation and her gastric symptoms persisted in spite of all treatment. September 24th she was ordered lavage without change in diet, and in the course of ten days she was entirely relieved from her gastric and intestinal symptoms, and has had no return at present writing, October 22d.

Salicylic Acid in Lupus Vulgaris.—In a case of lupus, in which the disease had already done much damage to the side of the nose, the cheeks, and the eyebrows, Dr. Marshall (*Algem. Wiener Med. Zeit.*) succeeded in healing the ulcer with salicylic acid. He employed an ointment containing 3 j. of the acid to ℥ j. of vaseline. The cicatrix obtained was flexible and smooth. Altogether the result of treatment was very gratifying, and the author warmly recommends the use of the drug in similar cases.

Progress of Medical Science.

Iodoform in Organic Disease of the Heart.—Professor Testa (*Giornale di Med. è Ter. di Messine*) has reported some observations made by him on the curative effect of iodoform in organic disease of the heart. He has studied the subject for several years, and has observed the effect of the drug in a number of cases. The remedy is not directed against the lesions themselves, but rather against the effects produced by them. He gives the drug in pill form every two hours, until one grain is taken during the day. Its most marked effect is to diminish the number of heart-beats, while it increases the arterial tension.

Calculus Impacted in the Ureter, and the Feasibility of Removing it by Surgical Operation.—Mr. Henry Morris, Surgeon to the Middlesex Hospital, London, discusses (*The American Journal of the Medical Sciences*) the feasibility of removing from the ureter an impacted calculus, which, if allowed to remain, will sooner or later surely cause destruction of the kidney, if not of life. He gives very fully the clinical history, diagnosis, and prognosis of these cases, and finally urges that a calculus impacted in the ureter sufficiently near the vesical orifice to be felt with the finger can with care and suitable instruments be extracted through an incision of the bladder wall without fear of wounding the peritoneum, or laying open the cavity of the bladder. He describes his method of operating as follows: Having rapidly dilated the urethra, if the patient be a female, or opened the urethra in the median line immediately in front of the prostate, if the patient be a male, the neck of the bladder should be passed by the index finger of the left hand, and a careful digital examination made of the bladder walls. If a hard fixed body be felt covered over by the bladder mucous membrane, at or near the orifice of one of the ureters, a gum lancet-shaped knife on a long slender shank should be introduced along the left index finger, and with it an incision should be made through the tissue covering the calculus. The knife should then be carefully withdrawn, and a slender scoop or curette, introduced along the index finger of the left hand, still retained within the bladder, should be employed for gently turning the calculus out of its bed. Mr. Morris urges that an exploration of the bladder should be made with the view of performing this operation on the ureter —1. In hydronephrotic or pyonephrotic enlargement of the kidney, associated with bladder symptoms, with the hope of re-establishing the natural drainage through the ureter. 2. Before nephrectomy is resorted to for hydronephrotic or pyonephrotic tumors, which have been opened or tapped through the loin without benefit. 3. Before nephrectomy is resorted to in cases of suspected renal calculus in which no renal tumor exists, and where, after digital exploration and puncture of the kidney through the loin, no stone is found. 4. In cases of sudden or rapid suppression of urine, or anuria, occurring after symptoms which have given rise to suspicion of stone in one or other kidney or both kidneys. A kidney which has undergone compensatory hypertrophy may become blocked by a calculus which has been forced by the superimposed urine in the lower end of the ureter, and which cannot pass the vesical orifice of the ureter. Such a kidney may be, probably is, the only one the patient has to depend on; and in this case death must ensue if the obstruction is not removed. If no stone can be felt through the bladder, life may yet be saved by giving a vent to the pent-up urine by lumbar nephrotomy.

A Case of Imperforate Rectum in which Lumbar Colotomy was Performed.—Dr. John H. Packard records a case of imperforate rectum in which lumbar colotomy was performed with an unsuccessful result. From his experience he is now of the opinion that in cases in which the object is to open the bowel with a

view not only to immediate relief, but to the subsequent establishment of the natural passage and closure of that artificially made, inguinal colotomy is the better operation. His preference for the operation in the loin was based upon a belief in its greater safety, as well as upon his familiarity with it as practised upon the adult. But the risk involved in opening the peritoneal cavity, as well as the somewhat greater difficulty of the operation, would seem to be outweighed by the advantage of far readier access to the cul-de-sac forming the terminal part of the gut, and by the better prospect of thus remedying the abnormal condition.—*The American Journal of the Medical Sciences.*

The Interval Treatment of Bronchitis.—In *The London Practitioner*, September, 1884, Dr. Drummond, of Rome, urges the importance of treatment in those patients who have just passed through an attack of bronchitis, and having no longer any definite complaints are apt to fancy themselves in perfect health. He says truly that the leading points to be observed in the management of the various forms of bronchial inflammation are, as a rule, sufficiently manifest and easy of application, so that when called in to such cases there is little need for hesitation in the choice of remedies. Such periods of attack are, of course, especially at the extremes of life, times of the greatest alarm, anxiety, and pressing danger to the patient, who is apt, however, to think that, when they have passed away, all is well again, and for this reason we commonly lose sight of him until another seizure compels him again to seek our aid. We know, however, that this is very far from being the case; that very often his condition in the interval is very critical; that the latent cause, of which the bronchitis is only a secondary consequence, is still present; that the interval is the period when really *curative* treatment is available, and is the most important part of the life-history of his disease. As time goes on, if no attempt is made to deal with the diseased condition to which the bronchitis is due, recurrences are more and more frequent; and if the patient is still exposed to the exciting cause, especially in a variable climate, they come to be taken as a mere matter of course, and serve to mark the winter exactly like the return of snow and fog. The patient is hardly ever well, and becomes habituated to a condition of permanent disablement; his power of resistance to weather changes is diminished, and a barometric sensitiveness to them is developed. In the background, steadily advancing, hidden lesions lurk; and increasing emphysema, heart dilation, lung collapse, interstitial lobular pneumonia, dilatation of the bronchi, and other changes progress, slowly but surely sapping the patient's strength, shortening the duration and diminishing the enjoyment of life; so that, although chronic bronchitis is, *per se*, attended with comparatively little danger to life, it none the less originates or aggravates other lesions, with which its clinical history is interwoven, and often in their nature more perilous than itself. As regards the nature of the interval treatment, it must of course vary in different cases, according to the individuality of the patient. General measures, proper hygiene, and such medicines as may tend to improve the patient's constitution are all indicated, and need not be enumerated here.

Treatment of Malignant Pustule by Cruciform Incisions and Cauterization.—Dr. Barberini writes to the *Rivista Clinica e Terapeutica* for September, 1884, giving an account of two cases of recovery from malignant pustule. The first case was that of a herder, forty years of age, of fair general health. On the left side of the lower lip there was a small black spot, the size of a centime, slightly elevated, and surrounded by an inflamed area, which he said appeared the day before as a little vesicle exuding a little water when scratched. The tissues beneath the black spot were very painful upon the slightest touch, and the lymphatics of the part were swollen and cordlike. The patient's temperature was 103° F. Fifteen grains of sulphate of quinine were given at once, and two elliptical incisions were made through the inflamed zone at about $\frac{1}{10}$ inch distance from the blackened eschar, the enclosed parts being excised. The wound was then cauterized with strong carbolic acid (eighty-five per cent.). There was but little hemorrhage, but the patient fell into a state of collapse almost immediately. The case seemed hopeless, but quinine and broths were prescribed, and after thirty-six hours the patient began to show signs of consciousness and progressed slowly to full recovery. The second case was very similar to the first. The diagnosis of malignant pustule was undoubted. The elliptical excision and cauterization were practised as in the first case, with equally good results.

The Treatment of Hemorrhoids.—Professor Verneuil recommends cold local applications and mild laxatives in the treatment of slight cases of hemorrhoids. For the more severe cases he employs forced dilatation. Hemorrhoids are caused, he says, by a strangulation of the superior mesenteric veins which traverse the muscular wall of the rectum. This strangulation gives rise to the formation of the venous tumors, precisely as varicose veins are occasioned by constriction from the ring of the soleus muscle. If now the muscular contracture be overcome the venous circulation is restored and the hemorrhoidal tumors disappear. In order to insure success the dilatation should not be attempted with the fingers, but should be accomplished by means of a speculum. By means of this instrumental dilatation the author asserts that hemorrhoids may be radically cured within a week without the use of the knife.—*Revue Médicale*, September 13, 1884.

Recovery from a Punctured Wound of the Heart.—An old woman, suffering from suicidal mania, was observed one evening to become suddenly pale, falling back upon the bed, with the features convulsed, the pupils widely dilated, and the head rolling rhythmically from side to side. The pulse was very small, almost imperceptible, and there was almost complete paralysis on the left side and paresis on the right. There was also vomiting. On searching for the cause it was found that the patient had stabbed herself with a shawl-pin. The pin had entered the chest at the apex of the heart, and had passed inward and a little downward for a distance of three and one-fourth inches. The instrument was withdrawn, and under the influence of stimulants the heart recovered its normal action. For some time there was dyspnœa, and the patient experienced sharp pains in the precordial region, but at the end of ninety minutes all these symptoms, as well as the paralysis, had disappeared. The patient slept tranquilly that night, and made a perfect recovery.—*Gazette des Hôpitaux*, No. 100, 1884.

Colotomy.—A retrospect of the operation of colotomy appears in the October number of *The American Journal of the Medical Sciences* from the pen of Dr. Batt, of Phœnixville, Pa. A surgeon who subscribes to the doctrine that an artifical anus should not be made in the case of imperforate anus, is not justified in doing so on any principle of morality, since upon him rests an imperative obligation to employ to the utmost of his ability the means placed at his command for the relief of human suffering and the prolongation of human life. When we likewise consider of what vast importance is the prolongation of life in a human adult, and how vast may be the concerns which hang upon such an event, we find the same imperative duty no less binding. To obviate death from over-distention of the bowels, which is one of the most painful and distressing terminations of life, colotomy will be justifiable under conditions of the greatest gravity; and may be indicated in any obstructive complication of the lower bowel which has passed beyond the power of local remedies, and in which a judicious trial of medical treatment has failed to afford relief. Mr.

Phillips, of London, tells us that one case of intestinal obstruction occurs in every one hundred deaths, and from 139 cases of obstruction which he collected, in which surgical aid was not given, 133 proved fatal. The fact that such a terrible fatality as this should exist, and an operation affording the advantages of colotomy be unperformed, must ever be a shadow upon the honor of modern surgery. Statistics are presented which show most conclusively that the dangers of the operation are very few, and that the number of recoveries depends very greatly upon the nature of the affection for which it is performed.

The Prevention of Hernia after Laparotomy.—In a communication addressed to the *Centralblatt für Chirurgie*, No. 35, 1884, Dr. Hagen-Torn writes that in a recent ovariotomy performed by him, the incision passed accidentally partly through the rectus muscle and partly in the linea alba. Five months later he saw the patient, and found that the cicatrix in the muscle was firm, but that in the linea alba had yielded, giving rise to a hernia. The text-books usually advise that the incision be made in the linea alba, but the writer, basing his opinion upon his experience in this case, believes that the liability to hernia after laparotomy would be averted were the incision practised entirely in the rectus muscle. He thinks, also, that healing by first intention would be favored by reason of the greater thickness of the muscular tissue.

Stricture of the Œsophagus from Muscular Hypertrophy.—Dr. Ruppert relates in the *Gazeta Lekarska*, No. 17, 1884, the case of a young man who suffered from a gradually increasing stricture of the œsophagus. A diagnosis of carcinoma was made, and gastrotomy was advised. The patient refused to submit to the operation, and died of starvation. At the autopsy it was found that the stricture was caused entirely by hypertrophied muscular tissue. The most careful microscopical examination failed to discover any trace of cancer, the thickened œsophageal walls consisting of connective tissue and muscular fibres in a state of fatty degeneration.

Resorcin in Laryngeal Affections.—Dr. J. Andeer speaks very highly of the value of resorcin in the treatment of affections of the larynx. He says that this remedy has not only the advantage of thoroughly disinfecting instruments without rusting them, but it also possesses the valuable property of producing anæsthesia of the parts with which it comes in contact. A weak solution acts as an astringent, a concentrated one as a caustic, with this peculiarity, however, that it never occasions cicatrices, but simply promotes the growth of new epithelium. This renders it specially applicable to the treatment of ulcerations of the mucous membrane. The author states that really surprising results are obtained by the use of resorcin in hyperplasias, in aphonia of long duration, and in other laryngeal diseases. In tubercular ulcerations it serves to moderate the cough and quiet the pain.—*Revue Mensuelle de Laryngologie, d'Otologie et de Rhinologie*, September, 1884.

Aphasia from Indigestion.—Several cases of reflex nervous troubles, caused by digestive disturbances in children, are related in the *Journal de Médecine et de Chirurgie Pratiques* for September, 1884. A little girl, three years old, lost all power of speech, or even of making a sound beyond an exclamation of pain when pinched. This state continued for two hours, but ceased immediately upon an attack of vomiting, in which a quantity of food and several unbroken cherries were thrown off. A little boy was seized during the night with an attack of acute indigestion, and the next morning was aphasic and in a soporific condition. He slowly recovered the power of articulation toward the end of that day. In another case a young girl of nine years was suddenly seized with heat of the head and flushings, alternating with pallor of the face. Then she became aphasic, but recovered the power of speech in about an hour after having vomited undigested the meal taken the evening previous. Fraenkel has observed a case of hemiplegia due to indigestion. A girl, four years of age, was seized during dinner with vomiting and complete loss of consciousness. The physician thought that the case was one of alcoholic poisoning, although the mother affirmed that the child had taken but a very small quantity of wine. In about half an hour consciousness returned, and then it was seen that the right upper and lower extremities were paralyzed, both motion and sensibility being lost. This disappeared gradually, and the following morning the child was perfectly well.

Oleate of Chloral Compound in Pruritus.—A recent writer (*St. Louis Medical Journal*) has had an oleate of chloral made, which he claims to have used with much success in pruritus anus, eczema, and other affections associated with much itching. The compound consists of one drachm each of camphor and chloral and one ounce of oleic acid, thoroughly mixed together. Camphor and chloral in equal parts, forming a liquid, has long been known as a valuable remedy in cases where local anæsthesia of the cutaneous nerves is desired, and has been employed in neuralgias and pruritus. The addition of the oleic acid will undoubtedly increase the penetrating power of the mixture. It may thus be found useful in allaying the itching, while other means are employed to secure permanent relief.

Treatment of True Pneumonia by the Cold Bath.—Two communications have been recently sent to the *Gazette des Hôpitaux* by Dr. Chaumier, in which he strongly condemns the old treatment of pneumonia by drugs, blisters, emetics, and bleeding. The author claims that statistics prove pneumonia to be more curable without drugs than with them, and that children always recover from pneumonia when drugs are withheld. He used the cold-bath treatment in fourteen children, all of whom recovered. His observations lead him to conclude that there is no danger from the bath in any stage of the disease. He gives a bath of ten minutes' duration, at from 82° to 90°, every two or three hours to an adult, and two or three times a day to a child. Each bath produces a lowering of the temperature of from two to three degrees, of the pulse from ten to thirty-two beats, and of the respiration from six to fourteen per minute. The *bruit de souffle* produced by the fever disappears, dyspnœa is decreased, and there is less thirst. The author is inclined to think that mortality may be lessened by the use of the cold bath, although he is ready to admit that his own observations concerned such cases only as would doubtless have recovered without treatment.

The Etiology of Convulsions in Children.—Children, as is well known, are far more prone to convulsions than grown persons. According to Dr. Kjellberg (*Schmidt's Jahrbücher*), this is due not to any increased irritability in the motor or sensory tracts or in the reflex centres, but to the fact that the brain is unable to exercise any controlling influence upon the reflex centres. Convulsions which occur at the commencement or during the course of any acute disease through direct central irritation are symptomatic. Those which are excited reflexly by irritation of the sensory nerve-endings are sympathetic. Symptomatic convulsions are due in part to disturbances in the circulation and in part to changes in the blood. Among the disturbances in the circulation, the most common is a rapidly produced cerebral anæmia. This may be caused by hemorrhage, a rapid waste of the animal fluids, or arterial spasm. In other cases it is due to cerebral compression or anatomical changes in the brain, such as extravasation of blood, tumors, softening, etc. Hyperæmia may also cause convulsions indirectly. When an excess of blood is carried to the brain the cerebro-spinal fluid in the perivascular spaces cannot yield, but makes pressure on the smaller capillaries, whereby they are emptied of their blood, and the

real condition is then anæmia of the brain. The action of venous stasis is very similar in depriving the brain of its necessary supply of arterial blood. There are often changes in the blood at the same time with these circulatory disturbances. An elevated temperature is one of the most potent of these causes, as by it the irritability of the nerve-elements is increased. The quality of the blood may be impaired also by the introduction of poisons, either those introduced from without or those formed in the tissues of the body itself. In this category belongs also the change in the milk of nursing-women induced by violent emotion. Sympathetic convulsions may be excited by almost any irritation of the sensory nerve-endings, in consequence either of increased irritability of the nerves or of diminished power of the reflex controlling centres. In regard to the presence of worms in the intestinal canal, the author admits that this may be a cause of convulsions, but insists upon the necessity of a search for other causes, since worms may be present and yet have nothing to do with the convulsions. He believes also that dentition may be of etiological importance, and does not admit as valid the objections of those who say that this is a physiological process and therefore incapable of producing morbid symptoms. He does not doubt the fact of an hereditary predisposition to convulsions in certain families, but admits his inability to explain it.

The Action of Hypnotics on the Cerebral Circulation.—Drs. Bergesio and Musso, having a patient who had lost a portion of the calvarium, were enabled to make observations on the circulation in the brain. They confirmed the view that the brain is anæmic during sleep. Paraldehyde gave the same result as natural sleep. Morphia and alcohol caused endocranial congestion. The authors remark that the hypnotic effects of these drugs do not depend upon the changes they cause in the blood-pressure, but upon some more intimate modification, perhaps of a chemical nature, of the cells of the cerebral cortex.—*London Medical Record*, October 15, 1884.

Experimental Diphtheria.—In a series of experiments Cohnheim and Litten, by temporarily shutting off the blood supply, produced in the respective tissues changes in many respects similar to diphtheria. Necrosis by coagulation (Weigert) was a constant result. Dr. Heubner, following up these researches, produced a local diphtheria, not by the ordinary method of cauterizing the mucous membrane, but by temporarily interrupting the blood-current. His experiments were made on the bladders of rabbits, the neck of the bladder being tightly ligatured with a silk thread for two hours. On the succeeding days the alterations produced on the vesical mucous membrane were carefully studied. On the first day, these alterations consisted in an intense hemorrhagic œdema of the mucous membrane, the epithelium being raised and tumid. On the second day, there was a solid coagulated exudation. On the third day, true diphtheritic patches were found on the mucous membrane. Still later was formed a "necrosis from coagulation" of the epithelium, and of the mucous and submucous tissues. Microscopically, this deposit, diphtheritic membrane, was seen to be morphologically identical with the deposits observed in diphtheria, following scarlatina, and in epidemic dysentery. This artificial diphtheria, then, is produced by the combination of grave inflammation with necrosis. That in the diphtheritic parts the circulation of blood existed, even shortly before death, the author was able to demonstrate by the auto-injection of the vessels, like that which takes place in a very conspicuous manner in artificial pustular infection, in most evident degree, by means of the coloration of the bacilli. In man, local croup may be caused by spasm of the capillaries of the mucous membrane, lasting about two hours, the capillaries then again becoming pervious to the blood. Such a transitory interruption of the circulation may happen even from the pressure of a swollen tonsil on the vessel. The diphtheria artificially produced by the author was not transmissible by inoculation in healthy animals. In the second part of his work, Heubner seeks to establish an artificial synthesis between local diphtheria and general infection. To this end he first inoculated animals in whom the mucous membrane was affected by local diphtheria, with pustular virus, and found an excessive accumulation of bacilli in the affected parts, but only in the interior of the vessels, and never outside them. Afterward he inoculated animals, which were made to contract a local diphtheria, with diphtheritic masses from a man affected by grave diphtheria; the animals presented splenic tumor, hemorrhage of the serous membranes, and died after two or three days with symptoms of acute general infection. Microscopic examination of the patches showed in the affected vessels of the mucous membrane certain bacilli, partly disposed in groups, partly distributed in diplococci, partly as chains of four links. The same result was obtained with inoculation of scarlatinal diphtheria. However, the author affirms absolutely that the bacilli found do not represent the diphtheritic virus. If this were so, they must have been found also in the man in the vessels of the affected mucous membrane. That, however, the author has never succeeded in finding, although he has examined a long series of sections of the uvula. And for general infection there is no need of special diphtheritic microphytes. The author recalls the researches made to produce sepsis by the inoculation of the oral liquid of different men, sick and healthy (Vulpian). The micro-organisms found in the diphtheritic masses of the oral cavity are consecutive to the disease and not *vice versa*. Therefore, as the author believes, the virus of human diphtheria has not yet been found to be constituted of an organized material.

Faradization in Obstetric Practice.—Dr. Tipiakoff describes the results of faradization as used in Professor A. M. Makëëff's obstetric clinic in Moscow (*Vratch*, Nos. 24 and 25, 1884). The conclusions at which the author arrives are these: 1. The electric current is a powerful as well as a simple and safe means of inducing uterine contractions; hence it is indicated for inducing abortion or premature labor, also in cases of uterine atony and *post-partum* hemorrhage. 2. Since the strength of the uterine contractions bears on the rapidity of dilatation of the os, faradization is indicated wherever a more rapid dilatation of the os is desirable; as, for instance, in cases of hemorrhage depending on placenta prævia or accompanying abortion with an irregular course. 3. In the puerperal period faradization favors a more regular and complete involution of the womb. 4. In cases of puerperal endometritis, faradization brings about continuous uniform uterine contractions, and in this way assists the organ to expel decomposed lochia; that is, it prevents the possibility of self-infection, and soothes the paroxysmatic pain which causes so great a discomfort to the patient.

Affections of the Liver in Inherited Syphilis.—In the *Archives Générales de Médecine* Dr. Barthélemy discusses the question of disease of the liver in connection with inherited syphilis, by the light of thirty-two cases, which he has collected from various sources, many being from English publications. From a study of these cases the author has arrived at the following conclusions. Inherited syphilis, like the acquired form, may give rise to four kinds of lesion of the liver: 1, a congestive form; 2, diffuse interstitial hepatitis; a cirrhosis rather hypertrophic than atrophic; 3, gummata; 4, amyloid disease. Affections of the liver are much more frequent than they are supposed to be, bearing in mind the number of subjects of inherited syphilis who survive. Judging from the frequence of affections of the liver, and from the fact that the cure or death of the patient may depend on whether specific treatment is adopted or not, the author thinks that the question of inherited syphilis should be borne in mind in every case of hepatic disease where the cause is

doubtful, or the course unusual, either in respect of the age of the patient, or in the absence of a history capable of explaining the malady. For, after alcoholism and malaria, inherited syphilis is, in the author's opinion, the most frequent cause of disease of the liver, not only in early but in later life.

Hache on the Pathology of Cystitis.—Dr. Hache thinks that lesions of the bladder and irritation applied directly to its wall and mucous membrane do not constitute a necessary and sufficient cause of cystitis, except in case of vesical tuberculosis, or of the presence of a rough and irregularly shaped foreign body. The causes capable by themselves of constantly determining inflammation of the bladder are very rare. Beyond tubercular cystitis, and other forms of cystitis due to some general morbid condition—as, for instance, those of rheumatic, gouty, and infective nature, which are not of frequent occurrence—there cannot be included in the above category scarcely any save severe accidental or surgical traumatisms of the bladder, and too sudden and complete evacuation of this organ after over-distention. Gonorrhœal urethritis does not often give rise to cystitis, except under the influence of some occasional cause or in a predisposed subject. Most of the predisposing causes act quite simply by determining a more or less persistent congestion of the bladder; others have a more or less obscure mode of action, although their influence is very decided. Chief among these predisposing causes are the tubercular, rheumatic, and gouty diatheses. These predisposing causes may sometimes become exciting causes by increase, extension, or repetition of their action, or through association with that of other causes of the same group. These latter causes are congestion and slight inflammation of neighboring organs, especially in the female; tumors, calculi, and foreign bodies in the bladder; incomplete retention of urine, with or without distention; habitual resistance to the needs of micturating, and all the causes of dysuria and functional over-activity of the bladder; stricture and foreign bodies in the urethra, hypertrophy of the prostate, etc. Finally, the part of exciting cause is more especially played by sudden and complete retention, by cold, by catheterism or exploration of the bladder. The latter cause can act only on a bladder predisposed by the presence of a tumor or calculus; the other two causes are more active, and may even by themselves suffice to excite an attack of cystitis. Dr. Hache's study of the pathogeny of cystitis has led him to insist on the importance of congestion and diathesic influences, especially the tubercular diathesis, and on the relatively limited part played by lesions of the urethra and prostate.—*Revue de Chirurgie.*

Hydrate of Thierpvlene.—This substance, which has been discovered by M. Boursier, can be extracted by distillation from the buds of several sorts of pine. The fluid is saturated with oxygen, and contains a large proportion of ozone. According to the author (*Rev. de Thérap. Médico-Chir.*, No. 15, 1884) it possesses very marked antiseptic and deodorizing properties, and can be used for dressing wounds and for painting the throat in diphtheria. The vaporized fluid has a smell of turpentine, and is said to be an efficient agent for the disinfection of rooms.

Lithotrity Extraordinary.—Dr. R. Cran, of Upper Luckimpore, Assam, states that stone is not so rare a disease in Assam as Dr. Partridge thinks. He relates the death of a patient, "after a most peculiar operation, which I shall describe as showing the advanced state of surgery to which they have attained. The priest, having placed the patient on his back, raised well the anterior wall of the abdomen, placed a stone on one side of it, and belabored the other with a second stone, desisting when the calculus was supposed to have been crushed. The patient died a few days after the operation. This was told me by the first man I operated on."—*Indian Medical Journal.*

Experiments on the Supra-renal Capsule.—M. Tizzoni, the Italian pathologist, has performed during the past year an interesting series of experiments on the supra-renal body. In order to avoid unnecessary sacrifice of life, the author studied the best methods of removing the supra-renal capsules without damage to the surrounding structures and with the infliction of the least possible injury to the system at large. After having made a small incision in the lumbar region at the level of the adrenal body, the parenchyma of the capsule was lacerated and its ablation practised, strict antiseptic precautions being observed. On the right side the neighboring vena cava inferior rendered the operation of extirpation difficult. For his experiments Tizzoni generally made use of rabbits weighing only about a kilogramme each, because in this circumstance the muscular mass of the lumbar region was but little developed, and so the operation was facilitated. When the animals succumbed as the result of the operative procedure, death was not due to the nervous accidents signalized by Brown-Séquard, but was caused by subcutaneous and intermuscular suppuration infiltrating the neighborhood of the wound. The majority of the animals which exhibited contracture of one or other of the front or hind limbs recovered, and it was only rarely that paralysis and death followed the appearance of the spastic contraction. The necropsy revealed in such cases the presence of an exudation about the meninges of the spinal cord and a softening of the spinal marrow without any demonstrable direct connection of the lesion of the supra-renal capsule with that of the nervous centres. Outside these compli cations—which may be regarded as quite exceptional—the operation was generally followed by no grave accidents; the animal, if the etherization were not too powerful, gave signs of pain only when the adrenal capsule was seized and lacerated. If this body, instead of being completely removed, were allowed to remain in the cavity of the abdomen (of course, after laceration of the capsule), the healing was much more rapidly effected; and if, some days later, the animal were killed, not a trace of the lacerated parenchyma of the supra-renal capsule could be detected; complete absorption of the essential elements appeared to have taken place. Then, according to Tizzoni, the supra-renal body is absorbed without giving rise to any phenomena such as might be interpreted to be of the nature of blood-poisoning, so that the adrenal capsule contains no organic poison; and if by treating the organ with various chemical reagents a poison be obtained, one may affirm that it is not produced during life, and consequently the poison must be due to cadaveric decomposition. A certain time after the extirpation of the capsule there commences to appear a brownish discoloration of the nose, as if the animal had been plunged in charcoal powder after having drank some liquid. Some small blackish linear markings also may be found scattered here and there over the mouth and nasal fossæ. The mucous membranes of these regions seem at first to be intact, but at the end of some days they become dotted with minute spots of the color of tobacco; the minute areas become circular as they enlarge, and by coalescence a bronzed surface of considerable extent and of a uniform tint is formed, and reaches its maximum intensity about the sixtieth day after the operation of removal or laceration of the supra-renal capsule. A remarkable circumstance is mentioned by the Italian observer, which is to the effect that the destruction of one capsule only brings about unilateral pigmentation of that side of the body on which the operation was performed. Tizzoni further states that the various elements of the supra-renal capsule may be reconstructed. He observed one case, one hundred and forty-four days after the supra-renal body had been almost totally destroyed, in which this regeneration had taken place. He does not seek to explain the mode of production of the bronzing which he observed.—*London Lancet*, September 27, 1884.

THE MEDICAL RECORD:

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THE UNITED STATES COMMISSIONER OF EDUCATION ON MEDICAL EDUCATION AND PRACTICE.

THE Report of the Commissioner of Education for 1882–83 contains an unusually elaborate review of the progress of medical education, written in a critical but at the same time candid and intelligent spirit. The views expressed and suggestions made are in harmony with those which have appeared in the editorial columns of THE MEDICAL RECORD during the past few years. Coming from a gentleman like General Eaton, however, who has made the subject of education a special study for many years, they have a fresh interest and force.

A review of the condition of medical education during and since colonial times is given, and the gradual evolution of the present system of making doctors described. It is shown that although we have now vastly better means of educating medical students than formerly, yet we are at present suffering from the consequences of a long-continued and irrational freedom in the matter of graduating and licensing medical men.

The old idea, that a physician should be a man of learning and letters as well as of art, having been dissipated, and all but a few restrications upon education and licensing having ceased to exist, "the past fifteen years," says the report, "shows a very rapid increase in the number of medical schools and students."

"In plain English," continues General Eaton, "the time has now come (the profession being so crowded and the increase of candidates for employment being so much greater in proportion than the increase of population) when the medical student pays to the medical college money for which he receives no calculable equivalent; he asks for bread and receives a stone. The really capable graduate is jostled, crowded, shouted down, and trampled upon by a horde of unwieldy behemoths, who not only intercept most of the work that he only is able to do satisfactorily, but who supplement their scant incomes by arts and devices that his nature and training forbid him to join in. Having overcrowded all other departments of medical employment, many of these physicians by the grace of a diploma have lately taken up the work of opening and conducting medical colleges, much to the wrath and confusion of the older schools, who would dearly like to retain their monopoly of oversupplying the market with medical 'spring chickens.' The position assumed by these older schools is exquisitely illogical: they do not like to establish effectual entrance examinations (which might force some candidates to defer the study of anatomy and chemistry until they had mastered the simpler mysteries of reading and writing) because they do not want to limit the number of doctors by artificial regulations. This phrase, quoted from a recent address by a widely known and much respected medical teacher and author, teaches us that artificial regulations mean all rules or usages that may or can hinder any young white man from paying money twice over for the privilege of hearing the same course of lectures during two courses of instruction. The regulations that forbid the faculty from receiving the money of a white *woman* or that of a *black* man, we learn by inference, are not artificial."

The report begins with some comparative statistics showing the number of schools of medicine, dentistry, and pharmacy in this country since 1873.

	1873.	1874.	1875.	1876.	1877.	1878.	1879.	1880.	1881.	1882.[1]
Number of institutions...	94	99	106	102	106	106	114	120	126	134
Number of instructors...	1,148	1,121	1,172	1,201	1,278	1,337	1,495	1,660	1,746	1,946
Number of students...	8,681	9,095	9,971	10,143	11,225	11,830	13,321	14,006	14,536	15,151

Another valuable table shows the present condition of these same schools:

	Number of schools.	Corps of instruction.	Students.			Libraries.	
			Present number.	Present students who are graduate students.	Graduates at the commencement of 1882.	Number of volumes.	Increase in the last school year.
Medical and surgical:							
Regular	80	1,314	10,523	851	3,617	40,057	1,011
Eclectic	10	100	907	80	312	1,400	200
Homœopathic	11	188	1,309	64	437	4,530	29
Dental	18	276	820	24	323	6,084	23
Pharmaceutical	15	68	1,592	2	427	5,695	263
Grand total	134	1,946	15,151	1,021	5,116	57,766	1,526

	Property, income, etc.			
	Value of grounds, buildings, and apparatus.	Amount of productive funds.	Income from productive funds.	Receipts for the last year from tuition and other fees.
Medical and surgical:				
Regular	$2,713,800	$321,283	$18,209	$456,600
Eclectic	228,600	3,000	.....	62,897
Homœopathic	310,000	.....	.....	40,500
Dental	87,000	.....	1,568	74,000
Pharmaceutical	180,200	6,800	372	38,219
Grand total	$3,519,600	$331,083	$20,149	$672,216

Quoting this same "medical professor and author" further in denunciation of the many new and small colleges which are springing up all over the country, the report adds: "Denunciations like the foregoing are of little value, for they accomplish nothing; when analyzed dispassionately they are reduced to complaints that newer competitors are underselling 'the old and well-known stands.' Of course the customers at the cheaper shops will get an article of inferior quality; that also is a 'law' of trade." We cannot agree, however, here with

the opinion further expressed that closing up the small and cheap colleges would do no good. It is only true that they will not close until there arises a wider demand for the best educated doctors.

An account of the courageous steps taken by a few of the leading medical colleges in enforcing preliminary education, and in adopting graded and longer courses, as illustrated by the University of Pennsylvania Medical School, Harvard, the Chicago Medical College, and the Woman's Medical College of this city, is then given.

The subject of regulating medical education and practice is one that particularly interests the profession at the present time. It will receive with respect, therefore, the unbiassed views of the Commissioner on this subject. These may be stated in a few words. The need and legality of some control is admitted, while as to the mode the report says: "The State of Illinois seems to have solved the problem of protecting the public without assailing the right of personal medical judgment."

In conclusion, the Commissioner offers the following suggestions as to the best method of regulating medical education, which we submit, for the present, without comment: "Every State and Territory, and Congress for the District of Columbia, should pass a law ordering every school teaching medicine or surgery in any fashion whatever to furnish unquestionable bonds or other like security for the speedy acquirement of a fund amounting to not less than $300,000; the laws should direct that this sum, as fast as any part of it is collected, shall be invested in United States bonds or productive real estate or interest-bearing loans on real estate security; the laws should also prescribe that the corporations so endowed shall distribute the income derived from such investment equitably between at least ten professors; that these professors shall teach, didactically or clinically, at least one hundred hours apiece in each calendar year, the instruction by each professor to be progressive in subject and character; that no students shall be admitted to these courses of medical instruction before passing a satisfactory examination in the elements of language, mathematics, physics, and biology; that no candidates shall be finally examined for degrees by a State board till they have studied three years, during each of which they must have studied at least one-third of the course of instruction provided by the ten professors and the thousand hours of teaching above mentioned, and, in addition, performed such an amount of dissecting, laboratory work, and hospital attendance as the faculty shall deem necessary; two or more schools desiring to unite their forces under the provisions of the acts should be allowed to do so, retaining one of the charters and names already in existence if they choose, but surrendering the others; and all charters not thus fortified and regulated within two years after the passage of the acts should be declared null and void."

MADNESS AND CRIME.

A young man named Gilbert W. H——, a physician's son, who had been studying, or intending to study medicine at Baltimore, went off on a debauch lasting several days. During this time he drank considerable liquor and performed a good many acts of drunken folly. Finally, he wound up by shooting two women in a house of ill-fame in Baltimore. He was brought to trial for murder in the first degree. Able counsel for the defence put in a plea of insanity. It was shown that when a boy he was peculiar, moody, solitary in his habits, and seemed to go through many of his duties in an abstracted and automatic manner. He was once brought home unconscious. Three local physicians, who had known him personally in the town where he lived, testified to his unusual mental state, and one of them thought that he was a case of melancholia.

Only one expert witness testified for the defence, and one for the prosecution.

The witness for the State was Dr. Gundry, of Spring Grove Asylum. The hypothetical question put to him by the district attorney tells the story, and was substantially as follows

Assuming that the party went into the house at 8 o'clock A.M.; went out a few minutes after and did not return till noon. In the meantime he had gone to a gunsmith and purchased two revolvers, the gunsmith at the time not noticing anything particular in his conduct or appearance. Assuming, also, that he went to a drug store and called for an ounce of prussic acid, then went back to the house, called for wine, threw it over his clothes and the clothing of his companions; assuming that he went into a second-story front-room up-stairs, and met the two women in company with two others; that he asked to be left alone with two of them. The others having left him, that he then locked the door and demanded a diamond ring of one of them. She refusing him, that he then went to a bureau drawer, took two pistols, went out of the room, returned a few minutes later, made a second demand, and the party still refusing, that he began firing, killed the two women, and fired at a third who came into the room. After it was over that he was cool and collected, and said that he did the act out of foolishness.

Dr. Gundry testified that the prisoner was sane and responsible. Dr. Wm. H. Stokes, of Mount Hope Hospital, testified that he was suffering from acute mania, not epileptic. The jury brought in a verdict of manslaughter, thus admitting a partial responsibility.

The case is instructive, as again showing the directly opposing views of two equally experienced medical experts. It also shows that the good sense of twelve men sometimes brings trials to a measurably correct issue, despite the contradictory illuminations of science, so-called.

There can be no question that H—— had never possessed a perfectly normal brain, and that he was of unsound mind at the time of his act. The real question would be, therefore, as to whether his mental state was the result of voluntary indulgence in alcohol and absinthe, and as to how much he was responsible for his condition. The facts brought out by the evidence are not sufficient, as reported, to allow of any profitable discussion on this point. In fact, the whole trial seems to have been hastily and superficially conducted.

MEDICAL RHYMES.

We are in receipt of a collection of medical rhymes, selected and compiled from a variety of sources, by Dr. Hugo Erichsen, of Detroit.[1] It forms a neat volume of

[1] Chicago: J. H. Chambers & Co. 1884.

220 pages, embellished by a number of illustrations, and gracefully chaperoned by a rather amusing introduction from the pen of Dr. Willis P. King, of Sedalia, Mo.

In France and Germany medical poems, both rhymed and totally unrhythmical, are commonly endemic, occasionally epidemic, and always welcomed and encouraged by the profession. But in our own country the medical muse has been rather coy and timid, quite probably for lack of persistent wooing.

The collection before us is a novelty, and a dangerous one too. If not speedily suppressed, we seriously apprehend that it will prove the starting-point of a violent outbreak of the medical rhyming disease. There is but one safeguard against the actual spread of this threatening scourge. It is the immediate extermination of the entire edition already published, with the stern determination on the part of an anxious profession to deal similarly with all succeeding issues. Perhaps the fell pestilence may thus be nipped in the bud and a national calamity averted. Let every practitioner, therefore, be he enthusiastic tyro, or the incarnation of accumulated experience and omniscient medical senility; be he the evergenial and ubiquitous general practitioner, or the modest, unassuming, hiding-his-light-under-a-bushel specialist; be he a staunch partisan of Old-Code legitimacy in punctilious professional advertising, or a radical, revolutionary No-Code iconoclast; be he a sullen, strictly scientific, materia-medical Nihilist, or brought up in the catholic faith of optimistic polypharmacy; be he merely a mild and harmless bacillophobe or a real raving, hopeless microbomaniac—why, there are many kinds and varieties of doctors!—let them all agree and for the nonce make a combined attack against this dangerous production. If every man of them will heroically grapple with but a single copy of the evil book, the threatened visitation may yet fail to attain the climax of a wide-spread and appalling professional disaster. But in order to successfully wrestle with and eventually overcome the dire effects of the "Medical Rhymes," it will be necessary to resort to cunning prophylaxis. To be forewarned is the best policy. We recommend, therefore, before attempting the perusal of this dangerous and vicious volume, the taking enough calabar to produce paralysis of the muscles of laughter. It is in this way, and in this way only, that fatal tonic and clonic convulsions of the diaphragm can be prevented.

It is, of course, out of the question to indicate precisely the varied contents of this novel collection of medical rhymes. So artfully and deceitfully has the compilation been made, that some earnest piece of tender poesy and touching sentiment is quite apt to be immediately followed by so ludicrous and mirth-provoking a selection that the sudden transition from soul-stirring pathos to irresistible shocks of loud laughter, is certain to capsize the regulating vaso-motors of the best-balanced professional constitution.

But in all seriousness, it is a real pleasure to reflect that there are doctors in our land who, besides the ability to look wise and prescribe dinner-pills, have a capacity for writing acceptable verse. Of course we all knew long ago that our honored Holmes became a greater poet only through having been a great practitioner, and that ten thousand verdant youths annually aspire to quickly become the latter, in order that later they may have ample leisure to become the former.

But what we did not know, and what we feel quite happy to learn, is that in all kinds of out-of-the-way towns and villages there may be found physicians, the mean drudgery of whose daily lives has not chilled warm sympathy with struggling, erring, ungrateful humanity; and that at least a chosen few can find honest, noble, manful words for expressing the true joy that lives in their souls, as well as the bitter anguish and disappointments that sometimes threaten to crush body and soul together.

> "Then struggle on, and on,
> With all the zeal you can,
> Your motto, 'Love to God—
> Love to your fellow-man.'"

PROGRESS IN CHOLERA STUDIES.

The newspaper report that Dr. Koch had finally succeeded in inoculating rabbits with cholera by his comma-bacilli is not true. Dr. Koch has not yet succeeded in producing cholera in the lower animals by means of his cholera-bacilli, or if he has, the report has not been made public.

On the contrary, the investigations of the British Cholera Commissioners, Drs. Klein and Gibbs, have so far, according to the *British Medical Journal*, tended to confirm the view that comma-bacilli are to be found in other diseases than Asiatic cholera. Furthermore, the gentlemen referred to have so far found that the bacilli are *not* present in great numbers in the intestines of those who die suddenly of cholera. Still more important is the fact reported that the comma-bacilli of cholera and of other diseases develop in much the same way, and that there is nothing specific in the mode of growth of Koch's bacillus.

Drs. Finkler and Prior, who discovered a comma-bacillus in cases of cholera nostras, are continuing their researches in the laboratory of Professor Ceci at Genoa. It is quite well determined now that their comma-bacillus does not develop in the same way as Koch's, and that it is of a slightly different form.

SERO-SUBLIMATE AS A SURGICAL DRESSING.

In an address delivered at the opening of the London Medical Society on October 20th, Sir Joseph Lister delivered a striking address upon the use of corrosive sublimate as a surgical dressing. After describing some recent unexpected failures with carbolic acid and eucalyptus, owing to the volatility of those drugs and the uncertainty as to the gauze impregnated with them being well prepared, he relates a series of experiments which he had made with corrosive sublimate. The great objection to the use of this powerful germicide was its irritant properties. Sir Joseph, therefore, endeavored to obviate this, and he succeeded in doing so by combining the sublimate with blood-serum. He found, what indeed was well known already, that corrosive sublimate forms with albumen an inert coagulum of albuminate of mercury, and that this coagulum was then soluble again in an excess of serum. The solution thus formed contains probably a double albuminate of mercury. At any

rate, all the germicidal properties of the sublimate are preserved, while the solution is at the same time perfectly non-irritating, in any strength in which it would be necessary to use it. Lister has so far used gauze saturated with a one per cent. solution. Experiments with a two per cent. solution showed it to be slightly irritating.

He says: "The corrosive sublimate is so intimately blended with the serum that when it dries no separation of crystals takes place. Whether we use 1 to 100, 1 to 70, 1 to 50, or even 1 to 30 parts of blood-serum, they are perfectly amalgamated, and therefore, from a gauze like that, no corrosive sublimate can fly off. It can be manipulated as you please, and as applied dry to the skin it is absolutely unirritating. If, however, such a gauze is torn, it gives off a dust which irritates the nostrils. It is therefore better to cut it with scissors. Then, in the next place, it is unirritating as acted on by the perspiration. If water is made to act on sublimated serum dried, it does not redissolve it, as serum does, but it renders the mass opaque, the water being only partly absorbed into it; and the water which remains unabsorbed contains exceedingly little of the corrosive sublimate, which is almost all retained by the albumen. Hence, when perspiration soaks into such a dressing, though it moistens it, it does not produce irritation."

The use of this sero-sublimate somewhat simplifies antiseptic methods, since it makes the use of a macintosh unnecessary.

Lister states that the new compound may be prepared very cheaply. It is only necessary to send to a slaughter-house, have the blood of a horse stirred while coagulating, and in this way separate the clot. "You then," he says, "have several gallons of serum." This is mixed with the sublimate in the proportions of 1 to 75, to 1 to 150.

Not many cases are reported showing the practical value of the new compound, though its germicidal powers are accurately demonstrated.

Perhaps Sir Joseph would have done well if he had studied the results of the use of corrosive sublimate by other surgeons more extensively.

In a series of articles recently published by Professor J. Mikulicz, of Krakau (*Wiener Medicin. Wochenschr.*, Nos. 142, 143, 1884), a number of cases are reported in which toxic symptoms were produced by the use of irrigating solutions (1 to 1,000 or 1 to 2,000). The danger is not confined to the patients, but extends to nurses and surgeons; and Mikulicz adds that in his opinion sublimate is more dangerous than carbolic acid or iodoform.

We look forward, therefore, to the practical outcome of Sir Joseph's highly important and scientific contribution with much interest, but with some incredulity.

The Clinical Society of the New York Post-Graduate Medical School is the title of a society recently organized in this city. It is composed of the professors, other teachers, and the matriculants of the school.

Bequest to a Hospital.—By the will of the late Mrs. L. J. Kowles, the sum of $25,000 is bequeathed to the City Hospital, Worcester, Mass.

News of the Week.

Cholera in Paris.—Our latest medical exchanges from Paris speak somewhat incredulously, if not facetiously, of the possibility of an epidemic of cholera occurring this year in that city. Despite this, the epidemic is already upon them, and is advancing rapidly. It was announced in the *Journal Officiel* that one case of cholera had occurred in Paris before November 1st. On November 7th, it was stated that there were several cases in the city, and that one death had occurred. Five days later 83 deaths were reported and 119 cases were admitted to the hospitals. Another despatch says that on November 11th there were 152 fresh cases and 56 deaths, and that the total number of cases to date is 252.

As to the origin of the epidemic accounts at present differ. One report states that the disease has been in the city since June last, but has till now been kept restricted. This is extremely improbable. M. Brouardel states that the disease originated among the rag-pickers of the densely populated Faubourg St. Antoine, who became infected by imported rags.

It is improbable that Paris will receive a serious visitation of the disease so late in the season.

Death of Dr. Joseph Allison Reed.—Dr. Joseph Allison Reed, the Superintendent of the Dixmont Insane Asylum, died suddenly this week, of kidney disease, at Pittsburg. Dr. Reed was born at Washington, Penn., December 31, 1823. He studied at Jefferson Medical College, where he received the degree of Doctor of Medicine in 1847. In 1857, he was appointed Superintendent of the Western Pennsylvania Hospital for the Insane. Dr. Reed made the treatment of the insane his especial study. He obtained from the Legislature the necessary appropriation for a new hospital building, and under his supervision the edifice at Dixmont was erected. Dr. Reed was a member of the Allegheny County Medical Society, the American Association of Medical Superintendents of Insane Asylums, and the American Social Science Association.

No Authority for Prohibiting the Importation of Rags.—Epidemics arouse an interest in very curious things. A while ago, the American hog was the object of international solicitude and diplomatic entanglements. Now it is rags. We are informed by the *Journal of Commerce* that the Secretary of the Treasury has no authority to prevent the importation of rags, and that his order is illegal; also that rags never carry contagion any way, and the Secretary's edict is, therefore, as unwise as it is illegal. In this connection we may observe that a new and cheap method of disinfecting rags in bulk has been recently devised and has been pronounced a decided success.

Rupture of the Penis.—Dr. H. A. Veazie reports in the *New Orleans Medical and Surgical Journal*, a case of true fracture of the penis. The patient gave his history as follows: "I was having connection, and during the excitement the party with whom I was having intercourse withdrew suddenly, and as I followed her my penis struck a bone, and I felt the organ break, with intense pain. I examined it, saw that it was swelling

rapidly and bleeding from the canal. I felt like urinating, and tried to do so, but could not, and, as I tried, the penis pained more and became more swollen." He then showed me his penis and it was bleeding from the meatus, the organ itself very much swollen. On examination I found that the penis had been broken through and through, except the cutaneous covering. The two fragments could be moved upon each other, and on making traction a distinct sulcus could be felt at the seat of the break, which was about one inch and a half back of the corona. The urethral spongy body andt he corpora cavernosa were evidently broken through. He ultimately recovered. Dr. Veazie states that this is the first case of the kind reported in this country.

[The late Dr. Valentine Mott reported two similar cases in 1848 to the New York Academy of Medicine ("Trans. N. Y. Acad. Med.," vol. i., p. 99), and referred to several others.—Ed.]

The Elevated Railroad and Injuries to the Eye.—The elevated railroad has proved quite prolific in injuries to the eye caused by the fine steel filings thrown into the air by the use of the brakes, and the sparks from the locomotives have occasionally also caused injuries of the same sort. A case of the latter kind came before the City Court a short time since and the jury awarded a verdict of $250 to the sufferer. The judgment was appealed from and the General Term has just affirmed it. Chief Justice McAdam, in delivering the opinion, said that the elevated railroads were bound to use the most approved methods of preventing the escape of sparks.

A Sanitary Convention.—The West has a *penchant* for sanitary conventions. One of these highly useful meetings will be held at East Saginaw, Mich., on December 2d and 3d, under the auspices of the State Board of Health.

Professor von Pettenkofer on the Non-contagiousness of Cholera.—At a medical meeting in Munich, October 15th, Professor von Pettenkofer said: "I think that we all have good reason now to break with contagionist views of the spread of cholera—we have sacrificed milliards owing to this false doctrine. I declare openly, that I now must uphold my localist point of view all the more firmly, and with all the greater conviction, as no proof has been brought against it even by Koch's investigations. An experiment ought now to be made to see if cholera can really be produced by Koch's comma-bacillus; hitherto, experiments on animals have been unsuccessful. I will, with pleasure, undertake to swallow bacilli cultivated by Koch himself, provided that there is no temporal or local disposition for cholera (that is, that cholera is not prevailing), as is the case now in Munich. Wars have been fought and men's lives have been sacrificed for objects of less importance; the enormous advantage is here so obvious, that the life of one individual is nothing in comparison to it. My example, which, I repeat, I would carry out with the greatest calmness, will find imitators. Twenty medical men would easily be found to follow, hundreds would join them afterward, and we should be able to judge from the result." Pettenkofer even declared he would see to his individual disposition for it, by acquiring catarrh of the stomach or intestine. "I value Koch as a bacteriologist very highly, and acknowledge his services in the fullest degree, but the conclusions which he deduces from his investigations I must directly dispute."

National Conference of State Boards of Health.—At a preliminary meeting, held in the city of Washington, D. C., in May, 1884, representatives from eighteen State Boards of Health being present, the National Conference of State Boards of Health was provisionally organized; and it was decided that its meetings should be held at the same times and places with those of the American Public Health Association. In pursuance of this decision, and in response to the call of the Secretary, Dr. J. N. McCormack, of Kentucky, the first annual meeting of the Conference was held in St. Louis, beginning on Monday, October 13, 1884, the Hon. Erastus Brooks, of New York, in the chair, and representatives from twenty States and from Canada being present. Papers upon cholera were read by Dr. John H. Rauch, by Dr. Charles Smart, and by Dr. C. W. Chancellor, of Baltimore. An address embodying the views of the conference as to the prevention of cholera was adopted, and was subsequently indorsed by the American Public Health Association. The Conference adjourned to meet in Washington, December 10th.

A Medical Practice Act Declared Constitutional.—On November 1st, says the New York *Medical Journal*, the Court of Appeals of West Virginia decided that the medical practice act of that State was constitutional. This is a substantial and practical indorsement of the good work done by the State's Board of Health.

Doctors who Died of Cholera.—Of one hundred and thirty-nine physicians engaged in attending cholera patients in Naples under the White Cross Society, twenty died.

The Late Dr. Rabbeth.—Sir William Gull suggests that a gold medal be struck in commemoration of the self-sacrifice of Dr. Rabbeth, who died of diphtheria contracted by sucking out the tracheotomy-tube of a diphtheritic patient.

Death from Methylene.—A young man, nineteen years of age, was given methylene by Mr. William Square, Surgeon to the East Cornwall Hospital, Plymouth, England, in order to have an operation performed. After getting well under the anæsthetic, the patient suddenly died of paralysis of the heart. The heart was hypertrophied, but otherwise normal. The proportion of deaths from methylene is about one in eight thousand.

American Priority in the Discovery of Cocaine (Erythroxyline).—We are glad to give prominence to the following letter from Dr. Samuel R. Percy, of this city, in which he puts in a claim, apparently a just one, of priority in the discovery of cocaine, or as he called it, "erythroxyline." He writes: "On November 4, 1857, I read before the New York Academy of Medicine an exhaustive paper upon the leaf of the plant *erythroxylon coca*, and stated that I was busy in its chemical investigation. On December 2, 1857, I exhibited to the Academy of Medicine one scruple of the alkaloid of the leaves to which I gave the name erythroxyline. At the same time I left with the librarian of the Academy this scruple of erythroxyline, a quantity of fluid extract and some solid

extract, and also a fine sample of the leaves. I read before the Academy the method of preparing the alkaloid and a number of physiological experiments upon dogs. I then stated that the hydrochlorate of erythroxyline had a peculiar but not unpleasant benumbing and paralyzing effect upon the tongue, unlike that produced by aconitia and not so persistent. The librarian of the Academy has been unable to find the paper or the alkaloid, but the fact of such a paper having been read, and such an exhibit having been shown, is recorded on the books of the Academy. I still hope to find the paper. Some three years after this, Niemann, in Germany, discovered the same alkaloid, and in his announcement called it 'cocaine.' Immediately upon this announcement I reiterated the priority of my discovery in Dr. Stephen Smith's *Medical Times*. I also personally saw Mr. George Wood, of Philadelphia, and he promised that in the next edition of the United States Dispensatory the subject should be fairly stated. He forgot it. The name cocaine is not a correct one, it is almost universally called cocoine, leading one to suppose that it is a product from the cocoa berry. With its correct name erythroxyline it cannot be mistaken. As an American, I claim the name given to it in America, and hope that every American surgeon will do the same."

The Opening of the Bridgeport Hospital.—The opening ceremonies of this hospital took place on Tuesday, November 11th. A number of prominent physicians and surgeons from this city were present. An eloquent and appropriate address was delivered by Dr. D. B. St. John Roosa. The meeting of the Fairfield County Medical Society preceded the exercises at the inauguration of the hospital. Dr. Wilson, of Bridgeport, demonstrated the efficiency of the new local anæsthetic, hydrochlorate of cocaine, by experiments upon the conjunctiva, and by hypodermic injections prior to the removal of a tumor of the forehead. The tumor was removed by Dr. Weir without pain. Dr. Weir made an address upon "Hospitals and Hospital Surgeons in Germany." Dr. Wile, Dr. Mundé, and Dr. Cromack also addressed the Society.

Female Internes in Paris Hospitals.—A cable report states that the medical and surgical societies connected with the Paris hospitals have voted on no occasion to admit women to compete for hospital positions.

How Cholera Originates.—The account given in *The Lancet* of the outbreak of cholera at Yport, Normandy, is most instructive: "On September 25th some of the crew of a French fishing-boat that had come from Newfoundland, and was anchored at Cette, one of the cholera-stricken towns in the south of France, arrived at Fécamp, a small seaport town in Normandy, not far from those above named. These men travelled by rail from Cette, and on their arrival at Fécamp, which is near to their home, they had to take a sulphur bath, and fresh clothes were issued to them before they were allowed to go any farther. Unfortunately, however, their own clothes, which were supposed to have been thoroughly disinfected (having gone through the form), were given back to them. On October 4th some of the disinfected clothes were washed in the sea by a female peasant, who fell suddenly ill, and died in a few hours; the physician who attended her at once recognized the malady as being Asiatic cholera. The victim was sister-in-law to one of the sailors, who was not affected by the disease, nor, indeed, were any of the others who accompanied him from Cette. The disease spread rapidly, and in the next day or two ten persons were attacked, of whom seven died, and the other three recovered."

Notes and Correspondence on the Use of Muriate of Cocaine.—At a meeting of the Royal Society of Physicians of Vienna, Dr. Koller announced his discovery of the use of cocaine in producing anæsthesia of the conjunctiva. It seems that he began his experiments upon animals in the laboratory of Professor Stricker. He then tried it upon the human eye with results already known. He used a two per cent. solution.

Docent Dr. Königstein announced that independently at the same time he had made the same discovery. He had used a one per cent. solution. Dr. Königstein states that it produces enlargement of the palpebral fissure, and protrusion of the eyeball and dilatation of the pupil. He thinks, therefore, that it acts upon the sympathetic.

In London, at a meeting of the Ophthalmological Society, October 9th, Dr. Arthur Benson, of Dublin, Mr. Marcus Gunn, and Mr. Nettleship described the effects of cocaine upon the eye.

Dr. J. R. Uhler, of Baltimore, writes to the *Maryland Medical Journal* that he has found that a solution of muriate of cocaine applied to the vulva mitigates the pains of labor.

Dr. E. S. Peck writes in correction of a note published last week regarding the price of cocaine. It now costs only thirty-five cents a grain, or less.

Dr. W. Oliver Moore writes that in eye surgery cocaine is six times cheaper than ether, as ʒ ij. of a two per cent. solution lasts for twelve operations, and costs $1.50; ether for the same would cost from $9 to $12.

Dr. H. G. Sherman, of Cleveland, O., has successfully used cocaine as a local application for tinnitus aurium. A patient suffering from chronic otitis media, who had long been treated by all known methods, came to him suffering intensely with noises in the ears. A four per cent. solution of cocaine was instilled into the ear. Tinnitus and deafness were lessened. A second case was tried with similar results.

Whooping-Cough and Resorcin.—A monograph on the nature and treatment of whooping-cough has recently appeared at Rio de Janeiro from the pen of Dr. Moncorvo. He accepts in a great measure the consequences of the germ theory as regards pertussis and looks on the affection as due to the presence of micrococci, which proliferate abundantly upon the mucous membrane which coats the upper part of the larynx above the rima glottidis, where the epithelial cells become infiltrated, and which region appears to be the seat of election for the proliferation of the micrococci. Resorcin directly applied to the mucous membrane of the region indicated has led to diminution in the number of spasmodic attacks, which lose their intensity, while the total duration of the disease is shortened. The benefit is said to be wholly due to the resorcin, because no other means were employed. The drug was used in the strength of a one per cent. aqueous solution as a topical application, by means of a soft brush mounted on a long handle. The application was made three, four, or five times a day.—*London Lancet*, October 18, 1884.

Reports of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, October 22, 1884.

GEORGE F. SHRADY, M.D., PRESIDENT, IN THE CHAIR.

GENERAL CARCINOSIS.

DR. JOHN A. WYETH presented a specimen, accompanied by the following history, furnished by his house-surgeon at the Mount Sinai Hospital: Franz S——, aged thirty years, a native of Germany, single, and a machinist, was admitted September 10th. Last May the patient noticed a swelling at the left side of the umbilicus. It gave him no pain. It gradually increased in size downward and forward until it gave him great inconvenience from its size, weight, and position. During the last four months the patient has lost eighty pounds in weight, has had for some time a cough, with some expectoration, occasionally bloody. Last April the patient had his left testicle removed at the German Hospital, presumably for tubercular disease. Of late the pain in the abdominal tumor has become so severe that it prevents him from sleeping. There was no history of gonorrhœa, chancre, or rheumatism; no œdema. One brother and his mother died of phthisis, a remaining sister has some lung trouble.

On admission the patient has a large tumor involving the umbilical, left inguinal, and left lumbar regions, extending about two inches to the right of the umbilicus downward almost to the symphysis pubis, and also around to the back. The tumor is painful on pressure. Pressure over the region of the left kidney gives rise to pain also on the under surface of the liver and over the left upper half of the thorax, especially near the sternum. There is some bulging at the upper part of the left side of the chest anteriorly, and the outline of the clavicle is entirely obliterated. The left axillary and supra-clavicular glands are much enlarged. The abdominal tumor has a nodular feel, and a number of small, nodular bodies can be felt near it.

Physical examination of the lungs revealed slight dulness and broncho-vesicular breathing at the right apex anteriorly; marked dulness, diminished voice and breathing; crepitant, subcrepitant, and sonorous râles at the left apex anteriorly. There was resonance between the splenic dulness and the tumor.

The patient had marked laryngitis, loss of voice, and spasmodic cough. There had been no hæmaturia at any time. He was much emaciated, his appetite was poor, temperature 100° F., and he complained of constant pain.

September 16th.—Great pain in the left leg and thigh, limb cold and mottled, and foot anæsthetic. No pulsation in the femoral artery. The swelling of the left lower extremity continued to increase, accompanied with pain along the course of the artery, and on September 22d several large blebs were observed near the ankle. The general condition of the patient grew worse, and he died on October 15th, with symptoms of pulmonary œdema.

Autopsy.—On opening the abdomen a large tumor was found occupying the left inguinal and lumbar regions, and covered by the adherent mesentery. The abdominal wall was not involved. The tumor was firmly attached to the vertebral column, and to it were attached the descending colon and left kidney. The ureter had been compressed by the tumor and hydro-nephrosis had resulted. The tumor seemed to arise from glands in the lower dorsal and lumbar regions, and had surrounded the aorta and vena cava completely. The vertebral column and intervertebral cartilages appeared healthy. The left external iliac artery was flattened and nearly occluded by the tumor, and there was thrombosis of the iliac vein extending down into the left femoral. The mesenteric glands were involved, as also were the glands passing below Poupart's ligament, with the femoral vessels. The anterior mediastinum was occupied by a new growth, which was attached to the sternum, and extended backward about one inch behind the trachea, surrounding it and the great vessels of the neck. The apex of the left lung was pushed to the left by the tumor, and the upper lobe was infiltrated with the new growth. The upper lobe of the left lung also contained numerous cavities, and there was marked bronchitis and laryngitis. The right lung appeared normal. The liver showed numerous broken-down white foci, varying in size from one-fourth to two inches in diameter. The kidneys were congested, the spleen and stomach were normal, and the bladder contained nodules similar to those seen in the liver. The brain was not examined.

The specimen had been examined by the pathologist of the hospital, who pronounced the new growth to be cancerous, probably originating in the lumbar glands, with metastasis into the mediastinum and other organs of the body. The point of interest in the case was the fact that the patient was operated upon for removal of a tumor of the testicle, which was considered to be tubercular in character, and within a few months subsequently a new growth occurred in the line of the lymphatics upon the same side of the body, which growth was carcinomatous, and was followed by malignant growths in the lungs, liver, bladder, and mediastinum. The testicle was removed by his colleague, Dr. Gerster, who had presented it to the Society as a tubercular testis, and on examining the records of the German Hospital it was found that the case was recorded there as one of tubercular disease of the testicle.

The SECRETARY thought that the group of testicles which Dr. Gerster presented to the Society had not been examined microscopically when exhibited, and therefore it might be possible that the specimen referred to by Dr. Wyeth was cancerous. [The records show that the testicles presented by Dr. Gerster had not been examined microscopically. They were referred to the Committee on Microscopy. W. M. Carpenter, Secretary.]

INHALATION OF A BLOW-GUN DART—TRACHEOTOMY—EXPLORATION OF THE TRACHEA AND PRIMARY BRONCHI—FAILURE TO REMOVE THE FOREIGN BODY WITH INSTRUMENTS—SPONTANEOUS REMOVAL SUBSEQUENTLY—RECOVERY OF THE PATIENT.

DR. WYETH presented a specimen which related to tracheotomy performed in an attempt at removal of a foreign body from the trachea or bronchi. A. A——, of Wallingford, Conn., ten years of age, on September 7th, while in the act of blowing a dart gave a forced inspiration and sucked the dart into his trachea. Violent coughing immediately followed. Respiration became difficult. The boy turned blue in his face, and his mother thought he was choking to death. The immediate symptoms of suffocation, however, soon disappeared. Between that date and September 10th the boy was carefully examined by the family physician who concluded that the foreign body had been carried down through the trachea and had lodged in the right bronchus.

On September 11th the patient was brought to New York, when Dr. Wyeth examined him and reached the conclusion that there was a foreign body in the right bronchus. He also called Dr. Leaming and Dr. Elsberg in consultation, and Dr. Elsberg gave the opinion that the foreign body was located in the right bronchus, although he was unable to see it. Dr. Leaming examined the patient, and located the foreign body in the second bifurcation of the right bronchus anteriorly, basing his diagnosis not only upon the hissing râle heard immediately over that portion of the bronchial tube, but upon the fact that there was associated with it an area in which the normal vesicular respiration was entirely absent.

On the following day chloroform was administered, and Dr. Wyeth performed tracheotomy just above the

sternum, introduced his little finger, passed it toward the bifurcation, but was unable to touch it. He then turned his finger upward, explored the trachea and larynx, but was unable to find any foreign body. He then introduced a pair of angular forceps into the trachea, passed them downward to the bifurcation, turned the instrument into the right bronchus, and began to fish for the body in the following manner: He opened the instrument to the extent of one-fourth of an inch, projected it one-fourth of an inch, and then withdrew it, and went on in this manner exploring all four quarters of the bronchial circumference. He did this throughout the entire right bronchus, but did not touch anything which felt like a foreign body.

He then took a piece of ordinary surgeon's wire, at the suggestion of Dr. Leaming, made a loop, carried it in without difficulty, and fished again in the region which he had explored with the other instrument, but was unable to find any foreign body. He then concluded that the foreign body was lodged beyond surgical reach, and further operative interference was discontinued. The patient rallied from the chloroform, and subsequently did well, only a moderate elevation of temperature ensuing, which soon subsided.

Dr. Wyeth kept the operation wound opened by stitching two rings of the trachea with fine silk suture to the integument on each side, and fastening the ends of the suture behind with adhesive plaster, which left the opening patent to the fullest extent. He left the wound open because he thought that perhaps the foreign body when loosened, if it was loosened, might lodge in the larynx, and the patient would suffocate before it could be removed, whereas, if the wound was open, it would probably lodge there as it came up from the bronchus.

On September 24th, twelve days after the operation, he called Dr. J. H. Ripley, Dr. A. Jacobi, and Dr. E. G. Janeway in consultation. Dr. Jacobi was doubtful as to the presence of any foreign body in the lungs. Dr. Janeway said that, from the physical signs, he did not feel like saying there was a foreign body in the lungs, yet he thought it was safe to treat the patient as if there was one there. Dr. Ripley believed there was a foreign body in the lungs, but was of the opinion that it had been shifted from the right to the left bronchus, because while there was the same sound, but less intense, heard at the point where the original râle was discovered, there was at the same time diminished respiratory murmur all over the *left* lung, which was recognized by all the consulting physicians at the time the examination was made. Dr. Ripley thought that the patient had coughed the dart up, and that with the next inspiration it was returned and lodged in the primary bronchus on the left side.

The result of the consultation was that the tracheal wound should be kept open by means of a canulated silver tracheal tube, and on the next morning Dr. Wyeth administered chloroform and opened up the wound in the trachea, which had in good part united. He also determined, after the wound was opened, to explore the left bronchus, and to facilitate this procedure he laid the boy upon the operating-table on his right side, with the head hanging well over the edge of the table, so that any blood which might be caused by the finger coming in contact with the granulation tissue would run out of the wound. As he pushed his little finger down into the trachea he prolonged the operation for perhaps half a minute. The boy's face turned blue, when he removed the finger and the patient inspired very deeply, and immediately afterward coughed and made a violent expiratory effort. While the patient was making the expiratory effort Dr. Wyeth closed the tracheal wound completely with his thumb, and when it had passed off he immediately introduced his finger a second time, and produced the same asphyxia with the same result, and kept his finger upon the tracheal wound the second time. During this entire procedure no foreign body was discovered. Dr. Wyeth then introduced the tracheal tube, was about ready to tie the little bands behind the neck, when the patient began to have some spasmodic action of the muscles of the larynx and the respiratory muscles became fixed. Suspecting that the tracheal tube had become obstructed he immediately removed it, found it clear, and just at that moment the dart was seen hanging from the right side of the mouth. He closed the tracheal wound immediately with adhesive plaster, and the boy made an uninterrupted recovery.

In reply to a question, Dr. Wyeth expressed the opinion that the foreign body never changed its location until it was finally removed by the violent expiratory effort.

The President suggested that the usual rule was that when such bodies became impacted in the trachea or bronchial tubes they were expelled by the first violent expiratory effort.

Dr. Wyeth remarked that it is well known that the trachea and bronchial tubes were tolerant of foreign bodies, and referred to a case in which the foreign body remained in the trachea three months without producing marked symptoms, and was then expectorated.

Dr. H. C. Coe referred to a case in which a young man inhaled an entire head of timothy grass. As a result of this it was supposed that he had some chronic lung trouble, and phthisis had been diagnosticated. Nearly a year afterward he coughed up the foreign body, immediately began to regain his flesh and strength, and ultimately made a complete recovery.

Dr. J. Lewis Smith said that several years ago he had a case in which a piece of a shell of a hickory-nut was drawn into the lungs. There was decided dulness on percussion over a circumscribed area, and symptoms of fibroid pneumonia developed, but the child subsequently expectorated the foreign substance and recovered completely.

The President thought that in Dr. Wyeth's case, where the point of the pin evidently pointed upward, it was safer to perform tracheotomy, explore the trachea and bronchi, rather than to wait for spontaneous removal of the foreign body. He also referred to a case in which a boy, five or six years of age, inhaled the spiral spring of an ordinary spring clothes-pin. The accident occurred while he was close at hand, and at first he thought the patient would die of suffocation, but he succeeded in catching the spiral spring with the end of his finger and removed it. It had lodged in the top of the larynx.

Dr. Furman referred to a case in which a patient, while under the influence of chloroform for the purpose of having a tooth extracted, inhaled a fragment of one of the teeth, and it entered the right bronchus. The patient suffered two or three weeks from bronchitis, but finally the foreign body was expelled.

The President remarked that while it might be safe to allow rounded bodies to remain in the trachea or bronchi, and await spontaneous removal, it would be, on the contrary, justifiable to perform tracheotomy where irregular-shaped bodies had entered the respiratory passage and become fastened.

Dr. Wyeth thought, in view of the number of cases mentioned in which the foreign body had been removed from the lower air-passages spontaneously, that it might be a question whether operative interference should be resorted to, at least very early.

Dr. W. M. Carpenter, as bearing upon this point, referred to a paper read by Dr. Leaming before the Surgical Section of the New York Academy of Medicine, in 1879. [On referring to Medical Record, vol. xv., p. 208, it will be seen that Dr. Leaming reported *six* cases of foreign bodies in the air-passages. In three cases the foreign body was expelled spontaneously; in two cases it was removed by operation. In one of the spontaneous cases the foreign body was a head of timothy, and although it was coughed up, the patient died of destruction of the lung, due to the presence of the head of hay. In one case the foreign body, a portion of a tooth, re-

mained, and produced disease which caused the patient's death.

In the discussion which ensued there was a difference of opinion with reference to the early performance of tracheotomy. W. M. C.]

Dr. Carpenter also thought that, in very many cases at least, the symptoms of immediate suffocation produced by a foreign body entering the lower air-passages soon subsided, and therefore that the apparent urgency for immediate operative interference passed away.

A method of removing foreign bodies from the larynx, such as coins, etc., not infrequently practised in rural regions, was to lift the child suddenly by the ears, perhaps patting him on the back, and holding the head downward at the same time.

TUMOR OF THE BREAST.

Dr. W. P. Northrup presented a microscopical section of a tumor of the breast, which was removed by Dr. C. C. Lee at the New York Foundling Asylum. The patient was forty-five years of age, the mother of ten children. Just before the birth of her last child she noticed a lump in the breast, and when the child was seven weeks old the operation was performed for its removal. The tumor was situated to the left of the nipple, and had been painless for the most part, but recently it had been the seat of occasional lancinating pains. There were two or three enlarged axillary glands. The nipple was markedly retracted. The patient had been seen by five or six surgeons of this city, who made a diagnosis of malignant growth, and recommended that it be removed. The tumor was about the size of an ordinary orange, very firm to the feel, and somewhat lobulated. There was no ulceration. An incision was made at the outer side of the tumor, and when the firm mass was reached there gushed out a large quantity of fetid material which looked like pus, and Dr. Lee supposed that he had opened an abscess, and those who were present also supposed that the cavity opened was that of an abscess. He accordingly pared off the edges to remove the induration as far as possible. In this he had no difficulty with reference to the anterior wall, but the posterior wall was almost of a cartilaginous induration. He did not remove the indurated glands of the axilla. The wound healed almost entirely by first intention, but its edges were much indurated and reddened; yet when the patient left the hospital the induration had somewhat diminished, and the enlargement of the axillary glands was very markedly decreased. The prognosis was regarded as very doubtful, as probably the disease would return.

The tumor microscopically exhibited a multitude of giant cells, such as seen in ordinary inflammatory tissue. The specimen had been examined by Dr. Delafield, whose ultimate report was, that one or two weeks before the birth of the child, and nine weeks before the operation, there was probably an adenoma; that subsequently an abscess developed, and that the adenomatous tissue was perforated throughout by this granulation tissue, which had obscured the original type of disease.

It was also possible that the affection was only an abscess, with induration. The probabilities, however, were that the original tumor was an adenoma, that an abscess occurred, and that the giant cells were simply a part of the granulation tissue, and not of special importance.

The President, as bearing upon this case, referred to one in which, two years ago, he removed a tumor that, according to the description, presented almost exactly the same physical appearance. The patient was forty years of age. There was, however, no retraction of the nipple, nor was the skin involved. There was slight enlargement of one of the glands of the axilla. The cyst which the tumor contained was so tense that when the knife entered it the fluid contents spurted out to a great distance and were exceedingly offensive. He removed the remainder of the growth, and also parts of the enarged glands of the axilla. At that time he regarded the prognosis as very good, but six months subsequently enlarged glands reappeared in the axilla, rapidly put on a malignant appearance, and were removed. Six months afterward, in the line of the lymphatics, the supra-axillary glands became involved, and he removed a very large one in the subclavian triangle. Both of these tumors, on microscopical examination, were found to be malignant. Subsequently there was a reappearance of the growth higher up along the side of the trachea, and in the glands by the side of the sterno-cleido-mastoid muscle. The patient is now dying of gradual suffocation and asthenia.

The President regarded the prognosis in Dr. Northrup's case as exceedingly bad.

Dr. Wyeth regarded the presence of giant cells as special to sarcomatous and tubercular tissue. While it was not generally conceded, he nevertheless believed it to be true that sarcoma never exists without the presence of giant cells.

Dr. Northrup did not regard the arrangement of the tissue as either tubercular or sarcomatous, and thought that the giant cells belonged to granulation tissue.

Dr. Wyeth said it had been unusual in his experience to see such a growth of giant cells in granulation tissue.

Dr. A. B. Robinson remarked that giant cells were of common occurrence in granulation tissue, especially the more chronic forms of inflammation.

The President remarked that clinically these growths were followed by secondary development of carcinoma, even though it was a chronic abscess. He should recommend, under such circumstances, removal of all the indurated tissue and all the enlarged glands from the axilla.

Dr. Wyeth thought that all enlarged glands in all operations for removal of tumors from the breasts should be removed.

ULCERATIVE ENDOCARDITIS.

Dr. J. Lewis Smith presented a specimen from a case of endocarditis, attended by hemorrhages, which occurred in the New York Foundling Asylum during his service in August last. The following history was prepared by the house-physician, Dr. H. P. Bissell: Mamie D——, aged five and a half years, had scarlatina in 1882, measles in 1883, and since had two attacks of pneumonia. In June of the present year she contracted pertussis, and on August 24th she was sent to the hospital.

On August 25th she was first seen by Dr. Smith. At this time her axillary temperature was 104½°; tongue dry and furred; some cough, but examination of the chest negative.

August 26th.—10 A.M.: Axillary temperature 100°, slept tolerably well during the night, and had two alvine evacuations since yesterday. 2 P.M.: Axillary temperature, 102⅘°; pulse, 160, after crying. The bowels are regular; the face pallid and anxious, the patient fretful when disturbed, and each day attacks of vomiting occur, and the vomited matter presents the ordinary appearance. Dr. Smith examined the patient thoroughly. The action of the heart though rapid was accompanied by no perceptible abnormal sounds, and the urine, tested by heat and nitric acid, was found free from albumen. From the history and appearance of the child, especially from its pallor, anxious features, and the persistent hacking cough which closely followed the cough of pertussis, Dr. Smith believed that the case was one of acute miliary tuberculosis, though the possibility of its being typhoid fever was considered. Three grains of quinine were given every six hours. Between 5 and 7 P.M. she had a copious evacuation from the bowels of very black blood, which strengthened the suspicion that the disease might be typhoid fever.

August 27th.—10 A.M.: Temperature, axillary, 102°; pulse, 160; has vomited often since yesterday, but no blood. An enema of hot water was given last night, since which no bloody stool has occurred. 2 P.M.: Tem-

perature, axillary, 104⅘°; pulse, 168; heart carefully auscultated, but no abnormal sounds noticed; its action, while very frequent, was strong and irritable. 8 P.M.: Temperature, 102⅗°; pulse, 144; had one normal stool since last record; has vomited much, for which bismuth and pepsine have been administered.

August 28th.—Had one dark stool since yesterday, not bloody.

August 30th.—10 A.M.: Temperature, 104°; pulse, 150; slept at intervals during the night; breathing still labored, and sighing; she takes nourishment readily and in fair quantity; physical examination of chest reveals only the abnormal breathing. 8 P.M.: Temperature, 102⅘°; pulse, 140. About two o'clock this afternoon she had a passage from bowels, consisting of about three tablespoonfuls of red blood, and another of the same character, but not so copious, a little later. For these she was ordered an enema of hot water and alum.

August 31st.—10 A.M.: Patient rested pretty well last night; temperature, 104⅗°; pulse, 160. 3.20 P.M.: Temperature, 102⅘°; pulse, 150. 7 A.M.: Temperature, 103⅛°; pulse, 150; respiration, 36; tongue coated and dry; some tenderness on pressure over abdomen.

September 1st.—10 A.M.: Temperature, 102°; pulse, 144; general condition about the same. 8 P.M.: Temperature, 103°; pulse, 140.

September 2d.—8 A.M.: Temperature, 101⅘°. 3 P.M.: Temperature, 103°; pulse, 140; a good deal of vomiting to-day; hands and feet cold.

September 3d.—7 A.M.: Temperature, 98½°; frequent vomiting. 11 A.M.: Temperature, 105½°; pulse, 168; head hot, hands and feet cold. 8 P.M.: Constant vomiting. To-day for the first time small extravasations of blood were observed under the skin, especially over the abdomen, and a few fine râles were observed in the right side of the chest, probably produced by extravasated blood in the alveoli of right lung; temperature, 102⅘°; pulse, 150; respiration, 44.

September 4th.—8 A.M.: Patient vomited blood twice this morning; temperature, 101⅘°. 2 P.M.: Temperature, 100½°.

September 5th.—9 A.M.: Temperature, 102°.

September 6th.—Died at 7 A.M.

This patient was examined by several physicians, but to all of us the disease was obscure. Acute miliary tuberculosis, typhoid fever, and purpura hemorrhagica were considered, but no positive diagnosis was made.

Autopsy, September 6th, nine hours after death.—Numerous points of extravasated blood underneath the integument; general paleness of all the internal organs. Brain: Entire right anterior lobe, except that looking toward the median line, covered by extravasated blood, which filled the intergyral spaces; a similar extravasation, but less in extent, over the right posterior lobe; no points of extravasated blood noticed in substance of the brain; small extravasations of blood under the pleura, and in substance of lungs, no other pulmonary lesions; similar extravasations underneath the peritoneum, and in substance of liver and spleen; none observed in the kidneys, which may explain the fact that the urine remained free from blood. The entire gastric, and a considerable part of the intestinal mucous surface, presented as mottled an appearance as the skin in measles, due to the extravasation of blood in and underneath it.

The state of the heart was of chief interest. In this organ we found the primary disease, to which all the symptoms were referrible. A small quantity of blood was found in the cavities, but an oblong fibrinous concretion was attached to the mitral valvé; its length three-fourths of an inch, its breadth one-third of an inch. The curator, Dr. Northrup, will state the results of his examinations, which establish the diagnosis of an ulcerative endocarditis.

This child, so far as known, never had rheumatism. It is only of late years that ulcerative endocarditis has begun to attract attention, and a number of cases have been reported. During the present year a case occurred in the Middlesex Hospital, London, and in the discussion it was proposed to designate the disease septic endocarditis. What may be the relation of micro-organisms to it, I am not prepared to say, but I believe that micrococci have, as a rule, been found in abundance upon and under the surface of the endocardium in those who have perished from this disease. The contamination of the blood and the infarctions seem to result entirely from the endocarditis.

Report on the pathological specimen by Dr. W. P. Northrup.—Heart and liver: From the margin of one cusp of the mitral valve hangs a pyriform body about two centimetres in length, half as wide at its widest part, its pedicle having a diameter of about a half centimetre. On the contiguous portion of the opposite cusp is a nodule of about the same diameter as the pedicle of the first. Its surface has a rough, villous appearance. Another nodule, much smaller, of similar appearance, is situated on one of the columnæ corneæ, at the level of the dependent end of the adjacent polypoid body. About six other small, some minute, points of similar appearance are found in the same (the left) ventricle.

Microscopic examination of the polypoid body shows nearly all of it to be made up of fine granular matter, composed largely of rod-shaped bacteria, coated on the surface with recent fibrin and white and red blood-cells. The peduncle fits upon a cone of new growth from the valve. The section now under the microscope is a longitudinal cut through the polypoid body, extending also through the cone-shaped base into the substance of the valve. In this section the whole process is manifest.

From below upward we find four gradations. (1.) Granular matter of polypus, made up of rod-shaped bacteria mostly. (2.) At the margin of the wart-like excrescence a zone of necrosis showing pus, broken-down tissue, etc. (3.) A broader area of swollen cells, either of connective-tissue cells or new cells, some pus, swollen and granular fibres. (4.) The deeper tissue of the valve in nearly normal condition.

The second section is a similar view of the nodule on the contiguous portion of the companion cusp. The process here shown is the same, though less advanced. It shows swollen cells, zone of necrosis, adherent granular mass skirted by fresh blood-clot. In both cuts the white cells in the clot increased markedly in proportion to the red, especially next to the granular matter, and are deposited in strata. The heart muscle and the liver were examined. The liver is the seat of moderate fatty infiltration. Neither liver nor heart muscle show micrococci.

This case seems to me, taking the history and the lesions, to furnish a typical section of malignant endocarditis or acute ulcerative endocarditis. There are no ulcers showing loss of substance. The lesion in this case is the nodular outgrowth of connective tissue, forming vegetations on the margin of the valve, the outer margin becoming ulcerated; upon this roughened surface the fibrin accumulated and formed the polypoid body. The part played by the rod-shaped bacteria I know nothing of. They are there in myriads.

The Society then went into executive session.

Prophylaxis of Migraine.—Dr. Haig reports in *The Practitioner* the case of a young man, thirty years of age, who suffered torments from frequent attacks of hemicrania, which ceased entirely after he adopted a purely vegetable diet, although they had recurred as frequently as three times a week before that time. Dr. Haig thought that possibly the neuralgia was caused by poisoning with ptomaines formed in the intestinal canal during the digestion of meat. After living upon an exclusively vegetable diet for a considerable time he was able gradually to return to a bill of fare containing a small quantity of meat.

THE NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, November 6, 1884.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

THE PATHOLOGY OF SENSORY APHASIA—WITH A SPECIMEN.

DR. R. W. AMIDON read a paper based upon original observations in one case, with a review of the history of twenty-three others reported by different authors.

The specimen was accompanied by the following history: A female patient, sixty-four years of age, married, had been in perfect health up to nine years ago, when she began to suffer from flatulent dyspepsia, headache, and other neurasthenic phenomena. Six weeks before Dr. Amidon first saw her she was seized with severe pain on the left side of the head, which continued three days, when she became flighty and excitable, and vomited.

At the date of his first visit, June, 1883, the right pupil was larger than the left, the tongue deviated slightly to the right, the right hand was not as much stronger than the left as it should have been, and it was somewhat tremulous. There was no weakness of the right lower extremity, and no marked disturbance of motility. The fundus oculi was normal, and acuity of vision was apparently perfect. With regard to speech, it was only in answering questions that she spoke incorrectly. She gave inappropriate answers to interrogatories, she could not count, or say letters, but when she spoke of her own accord her remarks were connected and intelligible. She knew all her friends except her husband, but called her son her father. She could not read and could not be induced to write. She could hear well, and could sing correctly. She was subject to periodic attacks of a spasmodic nature, occurring at intervals of about a month, characterized by a cry, a drawing up of the right hand, and drawing of the mouth to the right, followed by general convulsions, sometimes with involuntary evacuations. February 15, 1884, she was seized with a convulsion at 7 P.M. which continued until 11 A.M the 16th, when she became comatose and in this condition died. Her family stated that during the last twenty-four hours of life she passed very little urine.

At the autopsy the kidneys were found to be the seat of advanced interstitial changes.

The right cerebral hemisphere was normal. On the left side there was an irregular depression, with destruction of the cortex by softening, involving the inferior parietal lobule, the angular gyrus, the second occipital and the first temporal convolutions. There were atheromatous changes in the vessels supplying these parts, one of them being entirely occluded.

Dr. Amidon then presented eight diagrams and read the histories of cases reported by Balzer, d'Heilly, and Chautemesse, A. B. Ball, Chauffard, Giraudeau, Seppilli, and others.

Of the twenty-four cases, in eight with lesions affecting the visual and the auditory regions of the left hemisphere there was both word-blindness and deafness; in two in which the area of vision alone was affected there was word-blindness; in fourteen with the lesion in the auditory region there was word-deafness.

Dr. Amidon drew the following conclusions: Word-blindness is an incapacity to understand speech, written or printed, vision and intelligence being preserved. It is generally dependent upon a destructive lesion of parts of the inferior parietal, middle, angular gyrus, and second occipital convolutions of the left side. Its mechanism consists of an abolition of the transformation of written words into visual verbal images.

Seppilli's conclusions were that word-deafness was a lesion of speech clinically and anatomically distinct from aphasia. It was often associated with amnesic or motor aphasia, or with word-blindness. The lesion of word-deafness consisted in destruction of the first and second left temporal convolutions. Its mechanism consisted in abolition of transformation of spoken words into verbal images. He considered word-deafness of great value in locating a lesion of the left temporal lobe.

DR. FRANK H. HAMILTON then read a paper entitled

THE ASIATIC CHOLERA AT SUSPENSION BRIDGE, 1854, AND ITS LESSONS—WHAT WE KNOW OF CHOLERA.

The paper was the fulfilment of a promise made to the editor of the *Buffalo Medical Journal* in 1854, to write a paper, some time, on the Asiatic cholera as it prevailed at Suspension Bridge that year. After directing attention to the extreme fatality of the epidemic and its rapid spread among the workmen at Suspension Bridge, the author ascribed the great mortality to the elevated temperature, moisture of the ground, and alluvial, recently upturned soil. It was at the request of Dr. Rogers that Dr. Hamilton and two other physicians visited the patients during this epidemic. The following lessons which he had drawn from it were not presented as new, but as being entitled to special notice in view of the fact that we were liable to have cholera imported into this city at any time. His opinions would be expressed chiefly upon the question of what is the present state of knowledge of the nature, the etiology, the mode of propagation, and the treatment of Asiatic cholera.

First, Dr. Hamilton claimed that we had no positive knowledge of the existence of a specific cholera germ. In 1854 an Italian physician described a germ to the presence of which he ascribed the development of cholera. Recently Koch had discovered the comma-bacillus, which he regarded as the true cholera germ, but after reviewing the facts for and against Koch's views, and the observations of others who had investigated the subject, the author stated that in view of the conflicting testimony with regard to the theory of Koch that the comma-bacillus was the cause of cholera, we were justified in the assertion that the claim had not been established.

Even if it were determined that the comma-bacillus was always present in cholera and never in other disease or in health, it would not be certain that the bacillus and cholera stood in the relation of cause and effect.

Again, the theory was also defective in that it had not been shown that the introduction of this germ into the animal system would produce cholera. The inoculations by Koch himself, practised upon the lower animals, had been barren of results.

Again, if it were established that a microbe was the cause of cholera, the question would remain to be answered, which of the microbes hitherto described, or yet to be discovered, would prove the efficient agent. But it might still remain to be proven, should the experimentalists succeed in producing cholera by the introduction of a fluid containing a germ or germs into the system, whether the efficient agent were the fluid or the germ. It might be the fluid containing the microbe which was the cause of cholera, this fluid having taken on properties which no microscope could detect. The author did not wish to be understood as underestimating the importance of microscopical studies; much useful information had been derived from the microscope in the study of disease; but so far as the cholera or other epidemic infectious diseases were concerned microscopists had not taught us any important lessons either with regard to their cause or their prevention. Germicides kill the microbes when attacked outside of the body, outside of their native soil, but within the body these remedies had no effect upon them. Consequently, patients continued to die of cholera after the discovery of microbes. Again, it had not been positively proven that the active agent in the production of the disease resided in the intestines; the symptoms would indicate that it might also exist in the blood.

The cholera germ, using this term in its general signification, might be conveyed from place to place by the

clothing or any other textile fabric, by articles of food or water, or animate or inanimate substance. It might be conveyed a considerable distance by the air—how far it would be difficult to say; probably much would depend upon the force of the wind and other atmospheric conditions. He had reason to think it could not be thus conveyed farther than a mile or two. The theory of Koch, that the germ only found its way into the system through the mouth and stomach, was corollary to his theory of causation by the comma-bacillus, and that introduction of the poison through the mouth and into the stomach might be one of the means of propagation could be admitted, but that it was the only means the history of epidemics showed not to be true.

It was not necessary to assume that because the intestinal secretions were changed, or the mucous membrane congested, that the virus was originally implanted in the intestinal canal. The blood and the renal secretion also underwent changes quite as marked as those which took place in the intestinal secretions.

Although the cholera virus were received into the human system it need not necessarily give rise to cholera. It seemed probable that every person living in a cholera atmosphere received more or less of the virus into the system, but only a small proportion of these persons took sick and died. It was true of all the infectious diseases that the reception of the virus into the system did not necessarily produce that specific disease. It was also true, however, that a large proportion of those exposed to infectious diseases became infected, whereas only a small proportion of those exposed to cholera took the disease. A suitable soil was necessary. Cholera also differed from other infectious maladies in that one attack did not insure protection against another.

The conditions which protected against cholera were all those which went to prevent disturbance of the alimentary canal; also the avoidance of impure air, overcrowding, bad ventilation, decaying vegetable or animal matter, stagnant water, a warm and moist condition of the atmosphere. The most efficient agent for the propagation of the disease seemed to be the vapors rising from newly exposed soil, and decaying animal and vegetable matter, together with a warm and moist atmosphere. That filth was not the only efficient cause of the spread of the disease was shown by the fact that, during the epidemic at Buffalo, those persons living in dirty shanties on a sandy soil by the lake escaped. But there were instances on record which went to show that a favorable condition of the soil and atmosphere alone would not check the spread of the disease, if other local conditions sufficiently favored its spread.

The profession had long sought for a specific against Asiatic cholera, but there were really but very few specifics against any diseases, and none had yet been found for infectious diseases. But in the case of scarlet fever, etc., the disease would run a certain course, and we could only seek to conduct the case to a favorable issue, whereas in cholera, if we took it in time we could often abort it. It was seldom, however, that a patient was saved to whom remedies were not administered until after the period of collapse had arrived. The remedies which had proven most successful were those which had long been known to be most successful in the treatment of diarrhœa, cholera morbus, and analogous affections. The most efficient means prior to the stage of collapse were opium and rest. Dr. Hamilton preferred opium in the solid form to morphine. The patient would be more likely to recover were he removed to a region not favoring the propagation of cholera, and usually it would be found that the disease would not be spread in his new domicile.

It was believed that the cholera was brought to Suspension Bridge by some immigrants, but these people did not, so far as was known, suffer from the disease either before their appearance at Suspension Bridge or after their departure, which went to prove that the rapid spread and fatality of the affection among the laborers there was due to the condition of the soil and atmosphere. Again, in only a few instances, and in which the topographical conditions were favorable, was the cholera virus carried to and spread in neighboring localities.

Should cholera appear in this city, would it prove as fatal as it had done in Naples and the South of France? Dr. Hamilton answered in the negative, and for the reason that our climate is more favorable, our system of sewerage better, and we had efficient sanitary measures for the prevention of the spread of the disease. He referred to the success attending the efforts of the Sanitary Commission in stamping out cholera from Blackwell's Island in 1866, and spoke of the efficient work done by Dr. Yale, then one of the house-staff.

Dr. L. M. Yale said that his own experience with cholera had been confined to the epidemic on Blackwell's Island referred to by the author of the paper. The report which he then made included also the experience of his associates upon the Island.

The epidemic broke out at the workhouse. It had been preceded by a period of great heat and also the prevalence of diarrhœal troubles throughout the Island. It became necessary, therefore, to put diarrhœal remedies in various parts of the buildings, so that the patients could get them without the trouble always of searching for a physician.

The water-supply for a time was cut off, owing to some defect in the system of supply, and the bread had been sour for a short time.

The first case of Asiatic cholera occurred in the workhouse, although there had before been some cases of sporadic cholera in Charity Hospital. By the third day after the appearance of the first case Dr. Yale had thirty-three cases—twenty-three of which proved fatal—and about twenty per cent. of the entire number of inmates were carried off before the disease was checked. The epidemic occurred principally on the lowest ground of the island. More women contracted the disease than men, and this might be accounted for by the fact that the men went out to work by day, and their wards were larger; the women remained in the wards, and the evacuations stood in a tub in a room where the inmates often remained for a considerable time in conversation with one another.

Again, the patients, being unwilling to go to the cholera hospital, tried to conceal the fact when they were seized with diarrhœa. These faulty conditions having been corrected, the cholera was rapidly and permanently stamped out.

Dr. Yale mentioned one circumstance which was not easily explainable; namely, that in one pavilion as many as thirty cases of cholera developed; whereas in another pavilion, not thirty feet distant, not a single case occurred, although the conditions, so far as could be observed, were no better in the one than in the other.

Dr. Francis Delafield said he supposed all would admit that cholera belonged among the infectious diseases, or a class of diseases which did not develop unless the human body were infected by a specific poison. No matter how bad the influences under which human beings lived with regard to soil, food, and hygiene in general, they might develop many other diseases, but they would not develop cholera unless there were added to these other favoring conditions the specific poison that belonged to the disease. Whether that specific poison had always to be imported into new regions to develop the cholera, or whether it were capable of originating in new regions, might be a subject of dispute, but experience seemed to show that its home was India, and that other regions did not suffer until the poison was imported.

It being admitted that the disease was due to a specific poison, the question came up, What is that poison? Here we have had all varieties of theories, none of which have proven particularly satisfactory. The latest theory,

to which attention had been called this evening, was that, in accordance with the prevalent doctrine of the times, most of the infectious diseases are due to the presence and growth of certain minute organisms. Fashions of this kind in science and in medicine sometimes prove good, and sometimes prove bad; and whether a given fashion will prove the one way or the other could be known only after the lapse of some period of time. Dr. Hamilton had stated very fairly the evidence for and against this view of the causation of cholera. He had not stated, however, what Dr. Delafield considered particularly important to be borne in mind, namely, that there were only a very few men whose testimony was of any value in speaking of the presence or absence of germs in disease, and the reason was the very great difficulty attending the manipulations incident to the proper performance of the experiments.

Dr. Hamilton had called attention to the very important point of the bearing which the condition of the soil and hygiene had upon the development of cholera, and this might be briefly expressed in this way: Whatever conditions of air, of temperature, of soil, of food, and of general hygiene would predispose to the development of diarrhœa would also predispose to the spread of cholera. In other words, wherever there was present a predisposition to diarrhœa and also the specific poison of cholera we would have cholera developed in its worst form and to the widest extent. If all these predisposing conditions are absent, then the cholera germ may find its way to the place and not produce cholera at all.

This seemed to bring us to the means by which we can prevent the spread of cholera. In the present state of civilized society, quarantine measures seemed to prove useless if commercial relations were to be continued with other countries. What we should do was to seek to remove all the conditions which favor the development of the disease.

Dr. A. L. Loomis said that his personal experience with cholera had been limited to a few cases which he saw in this city in 1866–67, and he had therefore felt, when requested to discuss the paper, that he was largely in the position of one who was simply a student of the literature of the subject.

It seemed that, at the present time, we might justly divide the infectious diseases into three classes, according to the nature of their specific causes.

The specific cause in the one class produced its disease on being transmitted to the well person directly from one already infected. There was no evidence that the exanthematous diseases were transmitted in any other way than by direct or indirect exposure to the contagion.

The second class was that in which the disease was due to exposure to a poison developed outside of the human body, as decomposing organic matter.

The third class was that in which the poison developed within the living organism, or one affected with the disease, and was capable of reproducing the disease only when it had undergone certain changes after its discharge or removal from the infected person. To this class belonged typhoid fever, and cholera, as Dr. Loomis believed from his study of the literature of the subject. The home of cholera seemed to be Bengal, and epidemics in other parts of the world could always be traced as having originated there. He did not believe that cholera was ever of spontaneous origin. Dr. Loomis then gave instances which went to show that in every epidemic of the disease its origin could be traced to spread of the contagion through soiled clothing, infected water, etc. The view that the poison was active only after it had undergone certain changes on being removed from the human organism was favored by the fact that those making autopsies, those attending the patients, and microscopical observers of the fresh discharges, seldom contracted the disease. He was of the opinion that the poison entered the body only through the mucous membrane, but not necessarily by way of the mouth and stomach.

Sufficiently strict quarantine relations would prevent the spread of cholera, but the difficulty of establishing such quarantine had already been mentioned. The efficacy of the treatment spoken of by the author of the paper had been of great interest to him.

Dr. John C. Peters showed maps illustrating the spread of cholera from its home in India, and speaking of preventing an epidemic in this country by quarantine, said that so long as Denmark enforced her quarantine relations she had escaped from cholera, whereas as soon as those restrictions on one occasion had been removed the disease poison was imported, and she, with many other cities of neighboring countries, had many inhabitants perish. Quarantine had also proven efficacious in Greece.

The Academy then adjourned.

Correspondence.

THE INDUCTION COIL AND ITS VARIETIES —A CORRECTION.

To the Editor of The Medical Record.

Sir: In my article on the Induction Coil, etc., in the last issue of The Record, I wrote, that if the subject is "presented with any measure of clearness, it ought to be of some little service to those who are interested in, but have given little thought to, the matter." If, however, any one, even though he be the veriest expert in physics, can make head or tail to Fig. 2 of said article, he must possess a keenness of insight quite phenomenal. The continuous coil-induction apparatus is used by many physicians throughout the country, but its physical, physiological, and therapeutical characteristics seem to be little understood; and, therefore, in this paper I endeavored to answer as concisely and clearly as possible the many questions that have been put to me, both personally and by letter. Unfortunately, however, through some oversight, neither the printed matter nor the cuts were sent to me for revision, and the result is, an unintelligible description. A correct understanding of the part devoted to therapeutical considerations hinges upon this cut. As soon, therefore, as a new one can be made, and for the benefit of not a few of your readers who are interested in this matter, I trust you can find room for its reinsertion.

A. D. Rockwell, M.D.

November 8, 1884.

OUR LONDON LETTER.

(From our Special Correspondent.)

SIR JOSEPH LISTER ON CORROSIVE SUBLIMATE AS AN ANTISEPTIC DRESSING—THE HARVEIAN ORATION—ANOTHER DEATH FROM THE SUCKING OF TRACHEOTOMY TUBES IN CASES OF DIPHTHERIA.

London, October 25, 1884.

The event of the week has been the delivery of Sir Joseph Lister's address on Corrosive Sublimate as a Surgical Dressing. This event took place last Monday at the first meeting for this session of the Medical Society of London. Sir Joseph commenced his address by frankly acknowledging that he had had during the past twelve months instances of failure with antiseptic dressings and one fatal case. This induced him to turn his mind seriously to the subject, and he came to the conclusion that the volatility of many antiseptics is a cause of their inefficiency. They are completely preventive of sepsis when first applied, but this protective influence gradually lessens. Eucalyptus gauze was very troublesome to manufacture properly, and required great care both in the original preparation of it and also to preserve it unimpaired afterward. Sir Joseph mentioned incidentally that, as regards the carbolic dressings, he had found a week

the limit of time during which a carbolic acid gauze dressing might be regarded as effectual.

Salicylic acid was non-volatile; iodoform only very slowly volatilized. Neither of these had he found to be powerfully germicide. His attention had therefore been directed to corrosive sublimate. With regard to this agent numerous experiments were narrated at length, as well as cases in which it had been successfully applied. Koch's experiments with this substance were referred to. Koch had found a solution of only one part of corrosive sublimate in twenty thousand parts of water quite sufficient to absolutely destroy the vitality of the spores of the bacillus anthracis. One part of sublimate to three hundred thousand of a solution of extract of meat had been found by Koch sufficient to "inhibit" the action of the spores, *so long as they remained in it.* The "inhibitory action," as Lister terms it, was, he said, sufficient in surgery.

The "wood-wool sublimate" used in Germany was, he remarked, inconveniently bulky, so he had had a gauze prepared containing one per cent. of sublimate. This he had found sufficient, but he had found the protective (dipped in a solution of one in five hundred) irritate the skin. Numerous experiments were fully described in his long address, but the result at which Lister has arrived is the use of a gauze prepared with a solution of one part of sublimate in one hundred parts of blood serum from a horse. The original precipitate caused by the addition of albumen to a solution of corrosive sublimate is, he finds, soluble in excess of the albuminous serum, and the resulting solution is efficiently antiseptic. Two and a half parts of this solution are contained in each part of the gauze. Gauze thus prepared has not caused irritation. That prepared from a solution of one part of sublimate to fifty of serum has in some instances done so, but this has disappeared when the weaker gauze has been substituted. Lister strongly recommends that during the first twenty-four hours after an operation this gauze should be used in abundance in at least sixteen layers. With the sero-sublimate gauze dressing the "protective" is not used, and the outer wrapping of mackintosh is unnecessary. The instruments used during the operation cannot of course be previously soaked in the solution as with carbolic acid.

The annual oration at the College of Physicians has this year been delivered by Dr. Russell Reynolds. This oration has lately attracted more attention on account of the counter-claim set up in Italy for Cisalpino as a discoverer of the circulation of the blood. This claim was pretty well overthrown by Dr. George Johnson in his Harveian oration of last year, and he has since written a pamphlet on the subject, still more conclusively establishing Harvey's claim to priority. The present oration was chiefly interesting from the prominent relief into which what may be called "foresight" on the part of Harvey was thrown by the lecturer. He showed that Harvey had some knowledge of reflex action, even as now understood. He also appeared to have some forecast of our present-day knowledge of the vaso-motor system, and had some idea of the action of sexual selection on the perpetuation of species.

Another instance of a medical man acquiring diphtheria with fatal results from sucking a tracheotomy tube on a diphtheritic patient is reported this week. Dr. Samuel Rabbeth was the senior resident medical officer at the Royal Free Hospital, and only graduated at the University of London in November last, when he obtained the scholarship and first gold medal in obstetric medicine. His death adds yet another to the list of brilliant careers cut short prematurely. Nearly all the newspapers are eulogizing his memory and holding him up as a hero to be imitated. A hero no doubt he was, for it requires more courage to incur such a risk than to rush to meet death in scenes of excitement. The question, however, occurs whether he ought to be imitated. Can it—on any theory of ethics—be the *duty* of a medical man to lay down his life, or even to incur the grave risk of catching diphtheria, for the sake of affording a moribund patient the distant chance of recovery? Dr. Rabbeth's case illustrates the melancholy fact that not only may a valuable life be lost, but, as in this case, be risked in vain; for his patient died after all. Surely a suction-apparatus might be tried by the operator before applying his mouth to the wound, and, in hospitals, there is no excuse for such not being at hand.

OUR PARIS LETTER.

(From our Special Correspondent.)

ANGINA PECTORIS AND ITS TREATMENT—CHOLERA—HEALTH OF PARIS—HOSPITALS FOR CONTAGIOUS DISEASES.

PARIS, October 24, 1884.

THERE has always been great confusion, or rather misapprehension, as to the real nature or pathology of that terrible affection termed "angina pectoris," some looking upon it as a simple neurosis without any actual disease of the heart. Jenner, in 1799, considered that the disease in question was caused by ossification of the coronary arteries, whence the division into symptomatic and idiopathic anginæ. Other pathologists attributed the disease to atheroma, aortitis, affections of the heart, aneurism of the aorta. More recently Professors Germain Sée and Potain make out that angina pectoris is produced by the constriction or obliteration of the coronary arteries which result in cardiac ischæmia. Still more recently, Drs. Lancereaux and Peter, the former looking upon the disease as neuralgic, while the latter considers it to be a cardiac neuritis. Dr. Huchard, Physician to the Hôpital Bichat, in a work recently published by him, gives his experience of the disease, and seems to favor the theory advanced by Professors Sée and Potain. Dr. Huchard, placing the subject in a clinical point of view, divides the affection into *true* and *false*, or into organic and functional anginæ pectoris. The former is a rare disease and consists in an organic alteration of the coronary arteries, producing ischæmia of the heart, and which, sooner or later, almost always proves fatal. The pseudo or functional angina is much more common, and is met with as a complication of other affections, such as hysteria, neurasthenia, neurosism, exophthalmia, arthritis, rheumatism, gout, dyspepsia, etc., which angina is considered perfectly curable.[1]

As regards the treatment of angina pectoris, Dr. Huchard has found nothing equal to the nitrite of amyl, which he says fulfils the two principal indications: the suppression of pain and the overcoming the syncope which attend the disease.

Dr. Huchard prefers the nitrite of amyl to anything else during a fit. It acts with extreme rapidity, in a few seconds, and may thus prevent imminent death. Its action is explained as follows: It increases the activity of the intra-myocardiac circulation in the cases in which the latter is seriously impeded by the spasm or obliteration of the coronary arteries. Moreover, it acts on the peripheric arteries by producing dilatation in them, and by thus diminishing the peripheric resistance it favors and augments the energy of the central organ of circulation. Dr. Huchard administers the nitrite by inhalation in doses of three to six drops, which is poured on a handkerchief and may be repeated two or three times in the twenty-four hours. It is considered advisable to begin with the minimum dose, that is, three drops, which may be gradually increased to ten, twelve, fifteen, and even to twenty drops at a time. Dr. Huchard considers the nitroglycerine and the nitrite of sodium as inferior to the nitrite of amyl in the treatment of this affection. As adjuvants or preventives the author attaches great importance to the employment of the iodides of potassium or sodium, the latter being the more preferable, as it is

[1] This form is also produced by the abuse of tobacco, and is explained by the direct influence of the poison on the heart and its blood-vessels, and also by its action on the nerves of the heart and of the stomach.

better tolerated by the patient. Such is the treatment of the true angina pectoris. In the pseudo forms, the same inhalations combined with hypodermic injections of morphia may be usefully employed during the paroxysms, and hydrotherapy to prevent recurrences of the latter. The treatment appropriate to the concomitant affections must, at the same time, be rigorously attended to.

If the present cholera epidemic in this country, which, however, is gradually dying out, has been disastrous in one way, it has proved beneficial in many others. It has roused the people to a sense of the necessity of thorough sanitation, which I mean to be used in its widest sense—personal, domiciliary, and public. Everywhere sanitation is the order of the day, and among other measures the Parisians are only now beginning to look to their potable water, and they now admit that the water they drink may be the vehicle of disease-germs, and particularly those of cholera and typhoid fever, a fact long well known to them, but which up till now they have repudiated, simply because it was not a French idea. The sages have since discovered that the water of the Seine is a great deal more contaminated than it was twenty years ago, even in making allowance for the increase of the population, and projects have been set on foot in and out of the Academy of Medicine for its thorough purification, and for the adoption of such measures as may be necessary to prevent its being rendered foul.

Apropos of cholera, Dr. Leroy de Méricourt read his report on the numerous papers that were forwarded to the Paris Academy of Medicine on the nature and treatment of cholera, and among them was the report of the commission formed by the Société de Médecine of Marseilles, which concluded that Koch's theory was only a hypothesis without any foundation, and that the comma-bacillus could not be looked upon as the specific agent of cholera.

Paris is in a remarkably healthy state at the present time. It is free from epidemics of any kind, and even typhoid fever, which is generally so prevalent in spring and autumn, has been raging with less severity than it has done for many years previously, the number of deaths during the last two weeks being fewer than that shown in any previous weekly report of this year.

The Council of Hygiene and of Salubrity of the Seine has proposed the creation in Paris of refuge-houses where, in case of the occurrence of croup or any other contagious malady among children, parents could remove them at once. They will there be properly cared for until they have completely recovered, and thus prevent further contagion among other members of the family.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from November 2 to November 8, 1884.

SPENCER, W. C., Major and Surgeon. Ordered to Fort Trumbull, Connecticut, for duty as Post Surgeon, relieving Assistant Surgeon William J. Wilson, U. S. A., who will report at Department Headquarters and await further orders. S. O. 227, Department of the East, November 5, 1884.

CORBISSIER, W. H., Captain and Assistant Surgeon. Ordered to Fort Grant, A. T., for duty as Post Surgeon. S. O. 102, Department of Arizona, October 30, 1884.

HOPKINS, WILLIAM E., First Lieutenant and Assistant Surgeon. Ordered to Fort Lowell, A. T., for duty as Post Surgeon. S. O. 102, Department of Arizona, October 30, 1884.

EGAN, PETER R., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Lowell, A. T., and ordered to Fort Bowie, A. T., for duty as Post Surgeon. S. O. 102, Department of Arizona, October 30, 1884.

Official List of Changes in the Medical Corps of the U. S. Navy, during the week ending November 8, 1884.

CRAIG, THOMAS C., Passed Assistant Surgeon. To the Alliance for temporary duty. November 1, 1884.

SWAN, ROBERT, Passed Assistant Surgeon. Detached from the Naval Hospital, Norfolk, Va., and placed on sick leave. November 3, 1884.

WIEBER, F. W. F. Appointed Assistant Surgeon. November 3, 1884.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending November 8, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
November 1, 1884.....	0	51	29	2	51	67	0	0
November 8, 1884.....	0	46	39	2	73	55	0	0
Deaths.								
November 1, 1884.....	0	14	0	2	8	33	0	0
November 8, 1884.....	0	22	7	2	8	37	0	0

A FRESH-AIR SUPPLY FOR CITIES.—A writer in the *Journal de Médecine de Paris* advances the curious proposition of furnishing all large cities with an abundance of fresh country air just as they are now supplied with gas and water. He draws a vivid picture of the countless benefits that would follow from the general adoption of such a plan. The sick and the debilitated would regain health and strength, while the capacity of city dwellers for intellectual and physical labor would be greatly increased. The method proposed is simple enough. A large open field is to be chosen in the country and this is to be surrounded with a high wall and planted around with balsamic trees so as to filter the air from dust. Then by means of an immense fan the air is to be forced through a large conduit and distributed through smaller pipes to the chambers in the dwellings and other buildings in the city. In summer the air could be cooled and in winter warmed before entering the houses. The imaginative writer calculates that by means of a turbinated wheel three metres in diameter and a twelve-horse-power engine, 120,000 cubic metres of air could be delivered to the city every hour. Such an atmospheric *rus in urbe* would be very charming, and so doubtless would be the odor of this once pure air after it had traversed several miles of city soil in company with the sewers and the gas-pipes.

TEMPORARY PRESERVATION OF POST-MORTEM SPECIMENS.—In the second number of *The Asclepiad*, among the Opuscula Practica, Dr. Richardson describes a method of temporarily preserving specimens taken from the dead body. A wide-mouthed bottle, with a large stopper, which is made to fit evenly by the use of a little glycerin, is filled with a mixture of common coal-gas and one drachm of ammoniated chloroform. The stopper is then tied down. Any part which is desired to be preserved is placed in a fold of soft muslin and gently pressed so as to remove superfluous fluid. The next point is to introduce the part enveloped in the muslin into the bottle without displacing more of the gaseous contents than necessary. The ammoniated chloroform is supposed "to prevent the breaking up of the water of the tissues," and the carbon monoxide of the coal-gas preserves the color of the specimen.—*Lancet.*

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Original Articles.

SOME MORE EXPERIENCES WITH JEQUIRITY.

By CHARLES SOHNLIN, M.D.,

ST. PAUL, MINN.

NOT many new remedies produced such an excitement as the jequirity did, but like every newcomer it had, and has still, to struggle hard before it gets the recognition which it merits. The opinions of the authors are still now divided: some of them praise it as one of the greatest remedies, others condemn it altogether, and a third class of authors keep quiet, waiting for what will be the end of the fight. What we want is the publication of some more clinical observations, *sine studio et ira*, but with a more special description of the peculiarities of the cases.

Let us first look over a little the clinical experiences of some authors. After a few favorable reports a great deal of opposition was made by Deneffe, of Ghent. He says he never got a good result, but he saw in one case a simple vascular keratitis becoming a pannus crassus, and he had in one case a perforation of the cornea. He always maintained the inoculation of gonorrhœic virus, and does not think the jequirity has any advantages over it; on the contrary, he thinks the effect of the jequirity is transient, while the inoculation of the gonorrhœic virus produces a permanent cure.

But about the same time Dr. Peschel, of Turin, published first twenty-two and then about eighty full cures with jequirity, without any failures or any accidents. He had only to produce the inflammation several times, then the eye healed up completely. Twice he met a slight infiltration of the cornea which quickly healed.

In this country the jequirity was first tried by Dr. Gruening, of New York, who published two favorable cases in THE RECORD, February 10 and March 17, 1883. After this Dr. Peck published five first-class results, and twelve cases succeeding in a less degree. He never had a bad accident to the cornea, only some transient desquamation. Also Dr. Hotz, of Chicago, Dr. Standish, of Boston, myself, and others published some very good results with jequirity. Dr. Landesberg, of Philadelphia, treated 9 cases, but had in 5 cases no result, in 2 cases a bad inflammation of the cornea, and in 1 case a panophthalmitis.

Some bad results were also published in Spain. Dr. Osio lost three eyes by panophthalmitis, and had one case of perforation of the cornea and one case of a large leucoma. Dr. Chiralt, another Spanish oculist, had only favorable results.

The Russians like the jequirity: Dr. Adamyk, Dr. Schmidt (40 cases), Dr. Maklakow (10 cases), and others.

In Algiers Dr. Sédan had, under 16 cases, 3 full cures, 7 cases were improved, 6 remained unchanged, and in one case he had a bad affection of the cornea.

In Italy, besides Dr. Peschel, also Dr. Mazza, Dr. Ponti. Dr. Guaita, Dr. Manfredi, and others, had some first-class results. They could not cure all their patients, but a great many of them. Dr. Manfredi had some bad accidents, he lost three eyes, but, as he says himself, by the use of too strong infusions of jequirity.

On January 28, 1884, there was in the French Society of Ophthalmology a very instructive discussion about jequirity, which is especially interesting because there were given some more special indications for the use of this important drug. Coppez had only first-class results, never a failure, and never an accident. Menacho and Vallez unite in praising the jequirity. Nicati saw some good results only when the cornea was covered with pannus, and never in the beginning of the disease. Some men, like Galozowski and Dor, never saw a good result, but Nachet cured ten out of eleven cases. Armaignac had, in the same patient, on one eye a first-class result, on the other eye a failure. He produced with the massage just as intense an inflammation as with the jequirity. Panas likes the jequirity, but only in some inveterate cases with pannus. De Wecker thinks it has to be avoided in all the cases where there is the least tendency to purulent discharge. Gayet and Bordet had thirty-three failures with children. They treated with jequirity some children two years of age, who had had, in their opinion, for two weeks, granulated eyelids. When you read Bordet's paper, you do not wonder that he obtained no result, you only wonder that he always continued to treat other children, after having had some failures with them, and that from an experience limited to children he drew conclusions about the general use of jequirity.

Some important indications for the use of jequirity were given by Von Hippel. He found, as Sattler, that the condition of the conjunctiva is of great importance. When it was covered with scars, then he never obtained a typical inflammation; the cases with papillar hypertrophy were also unfavorable. Besides, the condition of the cornea is of interest. A cornea which is still in good condition is in greater danger from jequirity than a cornea covered with pannus, or even an ulcerated cornea.

In cases of fresh granulations with much hyperæmia of the conjunctiva, Von Hippel never saw a disappearance of the granulations. But when the conjunctiva was pale and to a large extent covered by some hard, yellowish, prominent granulations, then he had some first-class results; if there was at the same time pannus, the jequirity had a good effect upon it, but it disappeared only after two to four months. Some first-class results were obtained in cases of expired trachoma, with atrophy and shrinking of the conjunctiva and a thick pannus.

After all these many observations it seems a little strange that Professor Jacobson, of Koenigsberg, Prussia, last summer, scared by one case of panophthalmitis he produced with jequirity, wrote a furious article against De Wecker and the jequirity humbug, as he expresses himself. He admonishes the other physicians to be cautious, "as his case did not seem to be the only one of this kind." Also his assistant, Dr. Vossius, had no good results with jequirity. He used it over fifty times, but he cured neither the acute hyperæmic nor the pale dry granulations. He got a good result only at times in cases of old trachoma with scanty granulations and pannus; still, in these cases he likes better the sulphate of copper. Besides, he had many accidents; three times an acute dacryocystitis, one time gangrene of the eyelids, fever, delirium, a long-lasting affection of the ear, and periostitis of the nasal bones. Once the opacity of the cornea grew worse and glaucoma was contracted; again, he had a purulent keratitis and panophthalmitis. No other author had such bad luck as Dr. Vossius. Dr. Chauzeix, of Paris, had better success; he used the jequirity also in fifty cases, and with good result. On

the other side, Dr. Schenkl, of Vienna, had thirty failures with jequirity.

I, for myself, am very well satisfied with the jequirity after an experience of over fifty eyes treated with it. But I selected my cases carefully.

First.—I never used the jequirity in a child's eye; my youngest patient was a girl of fifteen years, with granulations and pannus of two years' standing. She went three times through the jequirity treatment and was improved a great deal, but not fully cured. When I dismissed her she had still a few granulations at the fornix and a slight pannus. The conjunctiva looked white, the cornea a little cloudy, without veins; but when I kept the eyelids open for a while, then the conjunctiva soon became red and covered with veins, and also on the cornea appeared a few red lines which disappeared, together with the injection of the conjunctiva, within a few hours.

Second.—I never tried the cure in a fresh case of granulations with hyperæmia.

Third.—I never proposed it in a case of dry, yellowish, sago-like granulations, where the only trouble of the patient is sometimes a burning sensation with some weakness of the sight. I treated only two eyes of this kind, by the special request of the patient, with jequirity, but the granulations looked, after the treatment, exactly as before. I added a few weeks of daily use of bluestone, and succeeded in relieving the complaints of the patient, but the granulations still exist.

Such eyes are in another danger from the integrity of the cornea. I never had a bad accident, but the only trouble I had was in a case of five-year-old granulations with intact cornea; the patient, a girl of twenty years, had only on one side a little pannus at the upper border of the cornea. I was badly surprised, at the fourth day of the treatment, when the inflammation was going down, to discover in the centre of both corneæ a gray infiltration, which lasted about two weeks and left some slight opacities.

Fourth.—I would never dare to treat with jequirity a granulated eyelid during one of the inflammations which occur so often in this disease. The accumulation of the two inflammations might be fatal to the cornea.

The most favorable cases for the jequirity treatment are those of three years' or more standing, where the granulations have passed the acme of their development. If the eyelid is equally thickened and the granulations are no more very prominent, but are imbedded in the substance of the eyelid, and look more like spots than like buttons, and if the upper half of the cornea is covered with a narrow reticulum of fresh veins, which appeared when the patient "had caught cold" and existed for a few weeks without any change, then you have the most favorable case for the jequirity treatment. Two weeks after the first instillation of jequirity the pannus and granulations are gone, the inside of the eyelid is smooth and equal and has quite a peculiar appearance, yellowish, pale, and gelatinous, as if transformed into a substance like one of the granulations. As soon as you see this appearance you can take the patient for cured. The thickening of the eyelids never goes away.

Less favorable are those cases where you find the eyelids not thickened, but hardened and crooked, excavated at the inside by curvature of the cartilage, and covered with scars and some scanty prominent granulations, and where the cornea is covered with a thin membrane, consisting of pretty well developed connective tissue and a wide-meshed network of old veins.

While I cured every case of the former kind with one jequirity inflammation, I had in my cases of this latter kind always to repeat it, and to add for so long a while treatment with atropia and yellow ointment that I did not know to which I owed the final result. In these cases the corneal trouble has by-and-by grown independent of the granulations; it is (if there do not exist any irritating eyelashes) maintained by the irregular form and the scars of the upper lid, and the chief remedy is the atropia Bluestone, which gives so good results in cases without corneal trouble, is quite useless in such cases; yellow ointment does good if combined with atropia. I did not see any harm done by the jequirity; even the whole process of the cure seemed to be shortened by it, but it is too hard to judge about that, as the duration of the trouble is also very different when treated alone with atropia and yellow ointment.

When the cornea has been affected for a long while in a more serious way the corneal trouble continues after the granulations are gone, sometimes in the most favorable cases. One patient of mine, whom I treated eighteen months ago with jequirity with a good result, calls about every six months at my office with a fresh pannus; it appears quite suddenly in a night and disappears, after instillation of atropia, within a few days. When he came to me he had granulations of ten years' standing, the eyelids were thickened and covered at the inside with granulations. The cornea was covered with pannus and several ulcers and spots. The eyes had been sore the last four months without interval, and he was nearly blind. The granulations disappeared within two days after a treatment of five applications of a two per cent. infusion. The ulcers of the cornea healed up within four weeks, and left only some slight spots and an irregular astigmatism. The lids remained thickened, their inside became smooth and took the appearance as above described. For the watering of the eye I split the tear-points and introduced the probes a few times, as I always do after the jequirity treatment. After treatment in this way he was enabled to do his work as a stonemason, and till to-day there has been no change in his eyes except the above-mentioned slight attacks.

Another trouble which outlasts sometimes the granulations are relapses of iritis. If anybody with granulated eyelids contracts an iritis with synechiæ in connection with his corneal trouble, then, of course, this is not cured by the jequirity; still the strong diminution of the intraocular pressure, which cannot be produced by any drug in such a degree as by the jequirity, may have a good influence upon it.

As for the danger from the jequirity, I am not afraid of that. If we take the great number of cases treated with jequirity till now, in comparison with the few eyes destroyed by it, then we cannot say that it is a dangerous thing. Besides, we must take in consideration that a good many of the accidents happened in the beginning, when we were not yet acquainted with the indications for the use of the new drug. Manfredi allows himself that he used too strong solutions, others may have had some unsuitable cases which they would now no more treat with jequirity. It is hard for me to judge about that, because I could not find out the details of all those cases; but, for instance, Jacobson's case was absolutely unsuitable for the jequirity treatment. His case was a middle-aged woman, with evidently expired granulations. She had the last attack of inflammation fifteen years ago. Jacobson used the jequirity with the intention to clear up an opacity of the cornea which existed since the childhood of the patient, and was nearly free of veins. The inside of the eyelids were covered with scars. Jacobson does not say that he saw any granulations; besides, she had a blepharophimosis and a partial symblepharon posterius. Indeed he diminished, eight days before the beginning of the cure, the phimosis by cutting the external corner, but it is nevertheless more than probable that in this case the cornea was exposed to quite an extraordinary pressure. I do not think that from Jacobson's case any other conclusion can be made but that the jequirity was used in a case unfitted for it.

The presumption that all the cases ending fatally, in which no too strong solutions were used, have been in a similar way unfitted for the jequirity treatment, like the one of Jacobson, is the only explanation I can give for their loss. If the jequirity would be a dangerous rem-

edy, as the gonorrhœic virus seems to be for the eye, then I think I should also have had an accident in my fifty cases. I used in no case less than three applications of a two per cent. infusion within nine hours, the first one at 9 A.M., the second one after noon, and the third one at 6 P.M. Often I added even a few more on the second day, when the eye was already inflamed.

But I allow that the necessity of selecting the cases properly is a great impediment to the general use of the jequirity by the physicians. This is shown by the experience of Professor Jacobson, who selected his unfitted case for a trial with the jequirity just because he mistook it for a very suitable one. I should be happy if my lines would help a little in this regard, and I am fully convinced that the jequirity, if confined to the proper cases, will by and by get proper recognition as a beneficial remedy.

THE TREATMENT OF DYSPEPSIA BY HOT WATER.

By THOMAS W. SHEARDOWN, M.D.,

WINONA, MINN.

In reference to the paper entitled "The Therapeutic Effects of the Internal Administration of Hot Water in the Treatment of Nervous Diseases," as read by Dr. Ranney at the meeting of the New York Academy of Medicine, October 16th, and published in THE RECORD of October 25th, my own personal experience may afford some items of interest.

Let me premise by stating that I have, until one year ago this last September, always enjoyed the most robust health, have been something of an athlete, having required medicinal treatment but once in my life, and that for pneumonia when twelve or fourteen years old, from which I fully recovered in due time. During the last week in August, 1883, I came near being prostrated from sunstroke; did not lose consciousness, however, but came within an ace of it. The week following I commenced having some trouble with my digestion, vomiting occasionally, this emesis soon becoming more and more frequent until I vomited a portion of every meal taken. Now, by vomiting I do not mean just simply spitting up a mouthful, or a small portion of food now and then, but a square old-fashioned vomit, ejecting a major portion of the contents of the stomach *each* time. This act of emesis was preceded by no pain or nausea whatsoever, absolutely none, nor have I ever experienced *any pain* or *nausea either before, during*, or *after* the act of vomiting, simply an uncomfortable feeling which would not subside until the food was ejected; then instantly all was serene and quiet until after the next meal. I could vomit easily, with no trouble at all, and at any hour of the day or night. The usual time for ejecting my food (for it became a habit) was from one-half to two and a half hours after eating. There seemed not to be so much trouble with my powers of digestion as with absorption and assimilation, for the act of chymification seemed to be performed all right. The stomach seemed to prepare the food, but there it would lie in a pulpy mass, the system refusing to take it up, except, of course, in very limited quantities. I was not always actually compelled to vomit after each meal, for I could, by exercising all of my will power, keep it and carry it over a meal, or even two meals, but there it would lie, and until I emptied my stomach I was always uncomfortable—mind, no pain, or nausea, or heartburn, or anything of the kind; simply an uncomfortable feeling that was instantly relieved by emptying the stomach.

This condition of affairs went on for about three months, viz., from the first week in September, 1883, until the day after Thanksgiving. During this time I had tried all, or nearly all, the modes of treatment and remedies recommended by our best authors. All of the pepsines, pancreatines, lactopeptines, saccharalid and otherwise, acids and alkalies, strychnia, nux vomica, and arsenic, etc., *ad infinitum*; in fact, all of the recognized forms of treatment—of course endeavoring to govern, regulate, and restrict my diet. From the pepsines, lactopeptines, and peptones, I derived positively not the slightest benefit nor from the acid treatment. From alkalies followed by arsenic I received some temporary benefit, but soon relapsed into the same old rut of constant and regular emesis. I was constipated, of course, and was obliged to resort constantly to laxatives, and used the common "seidlitz powder" more than anything else. Aside from this, my general health was pretty good. I had a ravenous appetite all the time, invariably arising from the table hungry; had no headache, no pulmonary or catarrhal difficulty; urine normal in color and quantity, but a little deficient in weight. Occasionally would see the black specks of indigestion before my eyes, and at five or six different times my eyes would lose the power of accommodation for a short time only. In trying to read or write, my words would all run together and be blurred, and I could not make my pen follow the line, and for a few minutes I could not exercise the power of speech with control; I could not say what I wanted to. I would try to say a certain word or phrase, ask or answer a certain question, and I would say something else entirely irrelevant. I would know and realize instantly when I used the wrong words, and would stop and try again, and after several times trying and using all my will power in concentration of my mind and thoughts I could get my words right. These nervous irregularities only occurred a few times and only for a few minutes, not over ten or fifteen, at a time; but they were accompanied by a little, not much, dizziness, a very weak and faint feeling pervading the whole system—an indescribable sick feeling not to be localized, but general. These nervous phenomena and sickness would pass away immediately after lying down flat on my back.

I think I have outlined the details of the trouble from which I suffered. Let me repeat one thing to make the point I am coming to more striking. From the first week in September until the day after Thanksgiving—about three months—I vomited every single day, never less than twice (unless I would force myself to retain my food), and frequently four and five times. I am safe in saying I vomited not less than three hundred and fifty times in that length of time. I had lost fifty pounds in weight, and was becoming very nervous, irritable, despondent, and disheartened. Was losing all energy and becoming very weak. How I got enough nourishment to sustain life at all is still a mystery to me. I had been carefully dieting myself, and regulating and restricting food both in quantity and kind, with no benefit whatever, and on Thanksgiving Day I made up my mind I would eat at least one more square meal, let come what would, so I ate a hearty, old-fashioned turkey dinner, with its accompaniment of mince pie, English pudding, etc., topping off with a plentiful supply of egg-nogg. As a natural consequence, I was very sick, more so than ever before. Just the day previous I had read Dr. Cutler's article, in the London *Lancet*, on the use of hot water in dyspepsia, and without much faith made up my mind to try it. The last thing at night on Thanksgiving was to empty my stomach again, and the first thing the next morning I had my maid bring a pint of hot water, boiling hot, to the bed before I got up. I took a clean rubber catheter and sucked the hot water through that, it being so hot I could not touch my lips to it at all, nor hold the vessel in my bare hands. I drank all of the water in less than twelve minutes. I laid in bed an hour and a half, and then got up and ate my breakfast of porterhouse, baked potatoes, bread and butter, and coffee, and I kept it down, and with no unpleasant feelings. At 10.30 A.M. I drank twenty ounces of hot water taken from the fire boiling, and taken through a tube as before, ate dinner at 12 o'clock and retained it. At 4.30 P.M. I drank twenty-four ounces of hot water, and at 6 o'clock ate my regular supper and retained it. I drank sixteen ounces

more half an hour before retiring. The next day I went through the same performance again, taking sixteen ounces each time, and likewise every day until Christmas Day. Not once did I miss taking my water in sixteen-ounce doses, nor did I vary five minutes from my regular time; nor did I during that time take one drop of liquid food, milk, tea, coffee, or cold water, or any hot water, except at the time specified.

After the first draught of hot water not one single time did I vomit, until Christmas Day, when I foolishly omitted my hot water, and partook of a Christmas dinner from which I was sick the remainder of the day and the day following; but recourse to hot water soon corrected it. Now, this shows the efficacy of the hot-water treatment. It stopped the vomiting at once—not slowly or gradually, but at once. From Christmas until the middle of last September, about nine months, I used the hot water, but not as regularly as I should have done. I would use it a couple of weeks at a time, and it would stop the vomiting at once, but after ceasing I would occasionally eject my food, but only after some indiscretion in diet. I removed from Tennessee (Knoxville, where I had lived the last year) to my old home in Minnesota, and since I have reached here, my native State, and where I have lived nearly my entire life, I have been able to discontinue the hot water entirely, and remain well, gaining strength every day and fast recovering my normal weight. This change of climate has, of course, helped to benefit me. Then one great auxiliary to the hot-water treatment I have found out is an *almost exclusively meat diet*, putting as little of a fermenting nature into the stomach as possible. It has been said of this hot-water treatment that it is very slow in its effects. In my own case it acted at once, from the very first draught.

The *modus operandi* of the hot water in my own case, I must confess, I do not fully understand. I had always considered my trouble reflex in character, and due to some irritation to the pneumo-gastric from overheat. For the past ten months I have used hot water in my practice in quite a number of cases of dyspepsia, indigestion, and allied gastric troubles, and with most excellent results every time when the treatment was persevered in for any length of time. Ordinarily, I think, the hot water acts more mechanically than otherwise, by moderately distending the walls of the stomach and washing them thoroughly, carrying down all débris, thus leaving the stomach perfectly sweet and clean for the reception of food. The presence of the water hot would tend to allay the inflamed mucous surfaces, and also tend to stimulate the secretion of the gastric juices, cold water having a diametrically opposite tendency in my humble estimation. The ingestion of cold water, and, in fact, any and all fluids, must be absolutely prohibited; *no coffee, no milk, no tea.*

After drinking the hot water in the prescribed quantities regularly for two or three days, there will be no sense of thirst between meals, as it were, the draught of hot water effectually satisfying all the demands of the system for liquids. The patient will begin to even relish the large dose, which at first thought seems so unpalatable. I used the hot water all in all for nearly a year, and never got tired of the taste. There is only one objection to its use, and that is the amount of time consumed and the bother and trouble in its preparation. After continued use, should it pall on the taste, flavor with a few dops of essence of peppermint or cinnamon, or a few drops of any of the dilute mineral acids make a pleasant change.

The rules laid down by Dr. Cutler, also by Dr. Ranney, must be rigidly enforced. I can fully endorse them. Without following closely these directions you cannot make a success of the "hot-water cure." Let me formulate them again. 1. Prohibit absolutely all other liquids. 2. Drink the water in as large quantities as will effectually satisfy all demands of thirst, as hot as can be borne, four times daily, an hour and a half before each meal and half an hour before retiring, the object being to have the stomach as nearly empty as possible when the water is taken, and to give it time to get out of the stomach before food is taken, thus avoiding dilution of the food. 3. Limit your patients to as near an exclusive meat (rare) diet as possible.

These three rules, if rigidly enforced and followed out, I fully believe, will effectually control that bugbear of American physicians—dyspepsia.

November 1, 1884.

DEAD TEETH IN THE JAWS.

By R. WOOD BROWN, D.D.S., M.D.,

LATE DENTIST TO THE OUT-DOOR SERVICE OF THE LONG ISLAND COLLEGE HOSPITAL.

UNDER the above title there have appeared in THE RECORD several articles the reading of which has prompted me to pen this paper. I shall notice the different points irrespective of the order in which they appear, limiting myself more particularly to the editorial of October 4, 1884.

The statement in the fore part of second section of the editorial of above date says: "It would not be strange if, in the course of events," "when all teeth without pulps, and hence in process of more or less decay, as well as those which the deposit of tartar, or other cause, had entirely divested of periosteal nourishment, would be promptly condemned as unfit to remain in the jaws." We take the liberty of disagreeing with the editor as regards the first part of this statement, and we think he is wrong in the latter part.

Teeth without pulps are not necessarily dead. Dr. J. Morgan Howe, MEDICAL RECORD, October 18, 1884, writes correctly that teeth "are not in an appreciable degree deprived of periosteal nourishment by the death of the pulp." When we have a periosteum destroyed we almost always find a pulpless tooth, but we do not consider a tooth or root dead unless the entire periosteum is absorbed; a tooth may be a living structure long after the pulp is dead or removed. If we should extract a tooth in a normal condition, crack it open, and try to remove the pulp from its bed with a pair of pliers, we will notice that there is some difficulty in so doing. Why? Because the pulp is attached to its parietes by odontoblasts, which are connected to the pulp by small bands, and to the dentine by fibrillæ which enter the dental tubes. It is thus shown why the dentine is so sensitive when attacked by caries, also the part it takes in the nourishment of the member. Now, take the same tooth and make a section of the root, and we will find, under the microscope, that the dentine is composed of tubes one-ten-thousandth of an inch in diameter; that the crusta petrosa, or cementum, is made up of lacunæ and canaliculi, but no Haversian canals; also that the periosteum is full of blood-vessels. We will also see that the tubes are connected to the lacunæ and canaliculi directly and by interglobular spaces, and that the latter are in connection with the periosteum.

Again, if we view a transverse section of dentine, we will notice that the tubes contain fibrillæ or a substance capable of carrying nourishment. In a dry section, the contents being contracted, this substance can be seen more easily. We have now a direct connection between the dentine and periosteum, and can understand why the pulp is not necessary to the vitality of the tooth, having, as it does, ability to draw nourishment from the periosteum, thereby maintaining its normal condition. It should be remembered that membrane covering the pulp is continued through the apical foramen and becomes the periosteum upon the roots. If there is a membrane lining the pulp chamber, we have not been able to find it. What part the pulp takes as regards tooth structure, after the tooth is formed, is, we think, not positively known, but our experience tells us that teeth are just as liable to de-

cay with pulps as without them. The damage from caries is done before the dentine is reached; the cause of caries is from without, not from within. If a tooth is perfect when erupted, it will last a lifetime unless injured by acids or abrasion. Pulps counteract decay so far as to throw out lime salts into the dental tubuli, which make a more perfect barrier to the encroachments of decay; this same process goes on after a nerve is capped. The dentine after this change is called osteo-dentine; why, we do know, as our microscopical investigations have not shown any characteristics of bone in the so-called osteo-dentine.

This action of the pulp in resisting decay is the only part it takes in nourishing the tooth, and even here there is not sufficient pabulum thrown out to resist the encroachment, much less to restore broken down structure. The only result from the barrier thrown out by the irritated pulp is a retardation of the progress of decay. The very fact that a large number of pulpless teeth and roots are retained in the mouth without periostitis, ulitis, or suppuration, is sufficient testimony that dental pulps are not at all necessary to the retention of teeth; also that pulpless teeth should not "be condemned as unfit to remain in the jaws," and that teeth are not necessarily in the process of more or less decay" because deprived of nourishment on account of dead or extirpated pulps.

As to the latter part of the editorial statement—"as well as those which the deposit of tartar, or other cause, had entirely divested of periosteal nourishment, would be promptly condemned as unfit to remain in the jaws." The main point here is the divestment of the periosteum. We do not think a root ought to be removed for the reason that there is no periosteum; it does not follow that the root is offensive and discharging purulent matter because divested of its membrane. There are two kinds of decay, hard and soft, the latter emitting a disagreeable odor, the former not doing so. Memory bears us out in saying that crowns of teeth are more apt to be the prey of soft decay than are the roots. The exceptions in these cases prove the rule. If a root is entirely divested of periosteum, the crown gone and no diseased tissue surrounding it, there should be some hesitation before condemning and removing from the jaws. Every root taken from either maxillæ weakens the arch and seriously threatens its usefulness. Again, the presence of tartar or salivary calculi does not always threaten the life or usefulness of a tooth, even if the entire periosteum under the deposit is destroyed. We have seen teeth covered with tartar to such an extent as to preclude the probability of any membrane remaining, yet for years after they have been doing good service.

There are certain conditions which should govern the extraction of teeth or roots, and they are pre-eminently pathological. Periostitis, where it is not traumatic, indicates one of two causes, or may both—a diseased pulp or periosteum. Here it is bad practice to extract, if of recent origin; if chronic and the roots crownless, we advise immediate removal. If there is a probability of the disease abating and there is enough structure to work upon, then extraction should be a *dernier ressort*. Affected teeth with crowns are more liable to produce inflammation and its train of disturbances than are roots alone, owing to continued irritation by mastication.

Periostitis does not always destroy the periosteum, but, if mild and chronic, may produce a condition known as exostosis. This many times is the cause of neuralgia from pressure upon the nerve. Many patients are dosed with all the neurotics known, without the thought of chronic inflammation of the dental organs; yet, on the other hand, many a dental arch is sacrificed without causing relief. Teeth in which the pulp remains after death very often causes discoloration from hematine which is absorbed into the dental tubuli.

The editorial remarks in the latter part of the second section, relative to the danger from putrescent teeth, are not too strong, but to the point, and certainly they do not merit discussion; in fact, they are irrefragable.

The object of this paper is an endeavor upon the part of the writer to correct what he thinks is an erroneous idea—the idea that teeth, because diseased, should be condemned as unfit for the jaws; also to show why they should be allowed to continue their usefulness. It should not be forgotten that roots preserve the contour of the dental arch, and are not always foreign bodies when the pulp is destroyed, even if both pulp and periosteum have ceased to perform their functions. We know that many constitutional disturbances are attributable to diseased dental organs, and, owing to professional inability, many teeth are lost. This naturally leads us to the third section of the editorial mentioned, which speaks of dental education. It is lamentably true that a large number of dentists are utterly incapable of treating severe, complicated cases of diseased teeth, but we must not enter the field of dental education, although it is a subject which has occupied our mind and pen, and is still occupying our thoughts.

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BUCCAL BREATHING.

Its Causes, Serious Consequences, Prevention, and Cure.[1]

By GEORGE W. MAJOR, B.A., M.D.,

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The habit of breathing through the mouth, instead of through the nose, is so very prevalent, and its serious results so little appreciated, that I have been induced to make it the subject of a few remarks before this Association. The first breath of life is taken through the nostrils, and if this precedent should not prove sufficient to satisfy us of the natural mode of respiration, let us refer to Genesis, where we learn that at the creation of man "He breathed into his nostrils the breath of life." The instinct of the savage mother leads her to carefully close the lips of her sleeping infant, lest the cold air might prove injurious should it enter the lungs by the passage of the mouth.

The professional trainer insists upon the athlete breathing with closed mouth. The fireman entering a burning building carefully avoids speaking, or the parting of his lips. It is recorded that one may breathe mephitic air for a short time through the nose, if the lips are firmly sealed. The army surgeon requires the raw recruit to undergo, in his examination, physical fatigue with closed lips.

All these decisions have been arrived at as the result of observation, though no doubt to many of those who insist that under certain circumstances nasal respiration should be strictly observed, the true reason for this precaution may be quite obscure, or perhaps entirely unknown. Nine out of every ten persons will tell you that the nose is the organ of the sense of smell, quite oblivious of the more important function of respiration.

This question of oral respiration is one that has not even at this late day received at the hands of the profession the study and research it truly merits. If it is the result of mechanical obstruction of a permanent nature, it is not a habit but an unfortunate necessity; but, on the other hand, temporary nasal swellings often develop a habit which is unconsciously and innocently pursued with the most serious results to health and development. Any one of a number of conditions may singly give rise to oral respiration, but we generally find more than one present before man allows himself to be converted into a mouth-breather.

In the human economy the nose performs several im-

[1] Read before the Canada Medical Association, held at Montreal, August 6, 1884.

portant functions, the chief being that of a respirator. It purifies, moderates the temperature and moistens the air before it reaches the sensitive larynx and lungs. It purifies the air by arresting foreign and irritating particles in their passage through the cavities of the nose. It moderates the temperature of the air by rendering it as nearly that of the human body as possible. It moistens the air by virtue of the secreting power of its lining membrane and glands.

An example of its first influence may be had in the fact that in oral respiration dust will lodge in the pharynx and larynx that under otherwise normal conditions would scarcely, if at all, gain an entrance to these organs. Of the second, on going into the cold outer air of winter a single breath through the mouth will, by its impact, provoke cough and a sensation of coldness, which, if taken through the nostrils, would be so moderated that on reaching the lower border of the palate it would give to one's sensation no appreciable difference of temperature, and could be breathed with comfort and impunity. Of the third, if from any cause nasal respiration is impeded, say during the night, we rise with dry, harsh palate, tongue, and throat, the secretion of the buccal mucus being neither so constituted nor sufficient to moisten the air and keep the parts themselves in a healthy state.

The mouth was alone intended for the taking of food and speech; it is, therefore, not very remarkable that many and baneful results should follow in the wake of those who violate the natural laws by putting parts to uses for which nature never intended them.

Certain physical deformities result from this habit, aggravated in the same proportion as that in which this hurtful method is practised. Among these may be mentioned general debility; malnutrition, as shown in spare habit of body and undersize; deformed chest, with prominent sternum, sunken sides, retraction at the line of attachment of the diaphragm, and rounded shoulders. The upper lip is more or less shortened, the mouth open to a greater or less degree, the upper central incisors generally prominent, with irregular development of the symphysis of the upper jaw. The alæ of the nose are thin and flattened, and the muscles of the nose and its neighborhood wasted. These conditions are always more marked on the side of greatest obstruction. The face presents a pinched expression. We also find an expression of stupidity in aggravated cases, with loss of memory occasionally—these two latter possibly the result more of internasal pressure than of mouth-breathing directly.

Dupuytren many years ago associated pigeon-breast with large tonsils; but in point of fact any interference with nasal respiration, be the cause what it may, will, if of sufficient gravity, produce this deformity. In addition to the appearance laid down as indications of oral respiration, I have observed an abnormal acuteness in the development of the upper jaw, whereby the hard palate is of great vertical depth, with corresponding narrowing from side to side. The central incisors in this class of cases are not prominent, but usually show at the middle line near the margin of the gums a point of decay.

It is also worthy of passing comment to note the frequency with which we encounter decay of the upper teeth. According to my idea this is largely dependent upon mouth-breathing. I do not think the prevalent opinion, that the cause lies in the escape of corroding gases from the stomach, is altogether a correct one. An offensive breath, in my experience, arising from the stomach, is somewhat infrequent. The odor, if not of decayed teeth, is most probably that of decomposed nasal or pharyngeal secretions, the tendency to change being manifest in disordered constitutional conditions, especially if accompanied by any elevation of temperature. The injury to the upper teeth may be regarded as the result of dryness caused by the passage of air between and around them, facilitating decomposition of any food present, and favoring the formation of acids capable of reacting vigorously. The lower teeth are protected by the lip and tongue, and moistened by the saliva, and are therefore free from the evil influences exerted above.

The injury to digestion, as a direct result of impairment of the power of mastication, at once suggests itself. It is not during the day only that the subject of oral respiration suffers; at night the aggravation is intensified. The position of the body during sleep favoring, as it does, increased flow of blood to the head, the result is increased difficulty, as shown by the open mouth, snoring, and general restlessness, the latter the direct result of deficient oxygenation, assisted no doubt by the fact that during sleep the voluntary respiratory muscles used during the day are no longer available.

I trust I shall not be considered as taking an extreme view if I should state that after a careful inquiry I have found that in a large proportion of mouth-breathers involuntary micturition during the night is not unusual. This latter, of course, is attributable to carbonic-acid-gas poisoning—the sensitive air-passage refusing to take in the cold, dry, impure air, and as a result, there is deficient lung expansion and aëration. It is unnecessary here to enlarge upon the consequences of deficient oxygenation, they are patent to every one.

The principal causes that lead to mouth-breathing are the various deviations of the nasal septum; ecchondrosis and exostosis of the nasal fossæ; hypertrophy of the turbinated bones or of their soft tissues; dilatation of the various sinuses, whether of a permanent or temporary character; tumors of various kinds, known as polypi; œdema of the septum, particularly common at its posterior border; overgrowth of the erectile tissue of the posterior terminations of the lower turbinated bones; adenomata of the vault of the pharynx, being an hypertrophy of Luschka's tonsil; growths in the same region, the most common being fibroids and hypertrophy of the buccal tonsils.

As the habit of mouth-breathing is developed usually in early childhood, its prevention must largely depend upon the recognition by those in charge of the formation of an unnatural and hurtful method of respiration. In order to do this, mothers and nurses must first know that the nose is the proper channel by which air enters and leaves the lungs.

If the practice is merely the result of *habit*, induced by some temporary nasal or naso-pharyngeal obstruction, the simple closure of the mouth after clearing the nostrils will generally suffice; or if still more obstinately pursued, a bandage tied under the chin and over the head will serve to keep the jaws in contact. If there be, however, any mechanical impediment, as swelling, hypertrophy, or growths, they must be treated radically. The age of the child never should negative surgical procedure, as the conseqences resulting from neglect of early interference may be fraught with very serions after-injury. In early infancy I have more than once used the galvano-cautery with the most satisfactory results.

It is manifestly the duty of the profession to teach the public that the nose is the organ of respiration; that it is also the organ of smell they will themselves discover. It now remains to briefly refer to the treatment essential for the removal of the obstacle to free nasal respiration. The first cause referred to, and perhaps the most common, is deviation of the nasal septum. I may say that in practice it is almost the exception to see a straight one. Deviation of the septum may be single, double, or multiple, and this may take place in a vertical, horizontal, or diagonal line, or present so many irregularities as to occupy every possible direction.

In many cases, especially of vertical deviation, the angle at which the cartilaginous septum is bent is so acute that the nostril in which the convexity presents itself is often so perfectly close as to be utterly useless for any purpose of respiration: the prospective gain on the opposite side is neutralized either by an hypertrophy of

the lower or middle turbinated bone and soft tissue, or perhaps by a second deviation posteriorly, giving the septum a sigmoid shape. As regards the side to which the deviation exists most frequently, statistics of over seventy cases compiled by myself do not show any very special selection as to right or left, but to the left, if anything. No doubt exists in my mind that deviations are the result of mechanical violence—blows or falls on the nose. Females, though presenting deviation, do so, for obvious reasons, very much less frequently than males, and also show a much less exaggerated type. In prize-fighters, or those who have engaged much in boxing, the cartilaginous septum is bent into every possible shape, without very severely affecting nasal respiration or the external form of the nose. In these cases the cartilage is telescoped downward much on the principle of a mast, but without radically closing the side passages. It has seemed to me that a vertical deviation is more likely to date from an injury received in childhood than from one later in life, and an analysis of cases strengthens this belief.

In May last I saw a lady, Miss T——, aged thirty-seven, who had been confined to her bed for five months, suffering from the most excruciating form of headache, which had refused to yield to a variety of treatment. On examination nasal obstruction from swelling of the mucous lining was found, deviation of the septum posteriorly, and more or less true hypertrophy of the turbinated bones. Means, such as nasal inhalations and sprays, afforded some relief by reduction of the swelling of the membrane, and much more decided, if not absolute immunity from pain was had by successive applications of the galvano-cautery. This result was obtained purely as the result of diminished pressure. At first the patient was incapable of even standing alone, but in a few short weeks had gained strength, and is now perfectly restored to health.

A second instance, Miss M——, aged twenty-eight, who had for some months been the subject of hallucinations, and, at times, of violent mania, was referred to me for a pain felt on the right side of the head behind the ear, and covering a space of the area of the palm of one's hand. Nasal obstruction in the right nostril, the result of deviation, was noted, and when in the course of three weeks it was somewhat reduced the mental condition had wonderfully improved, and convalescence is now complete. The pain, which was described as a sense of pressure, improved *pari passu* with the reduction of the nasal stenosis—as in like proportion did the mental state. Each must draw his own inference from the report of this case.

Under the head of deviation, a rather interesting abnormal hyper-development of the vomer, giving rise to buccal breathing, might find place. Miss D——, aged twenty-two, was sent to me for treatment by my esteemed friend, Dr. Arthur A. Browne, of this city. Nasal breathing was impossible, and more or less deafness was also complained of. The anterior nares showed no cause. On exploring the vault with the index finger a very peculiar state of affairs was found to exist. It gave the impression to the touch of a partition running antero-posteriorly, dividing the naso-pharynx into two separate lateral chambers. This bony extension refused to be displaced, and seemed continuous with the vomer in front, being joined to the vault above, and to the posterior superior pharyngeal wall behind. On examination with the rhinoscopic mirror the above description was verified. It was covered with mucous membrane, which had undergone catarrhal swelling, obstructing the passage of air and pressing on the Eustachian orifice laterally. Under appropriate treatment the engorgement was relieved, and with it all the discomforts for which advice was originally sought. There is but one other case of the kind on record, that reported by Dr. John N. Mackenzie, of Baltimore.

The fourth and last case that I shall present to you is that of a prominent canon who applied more for relief from vocal disability than for any pain or nasal inconvenience. He was a confirmed mouth-breather, probably from childhood. There was an extreme vertical deviation of the cartilaginous septum to the left, entirely obstructing the nasal passage of that side, while the concavity on the right was occupied by a long myxomatous tumor. The soft palate clung listlessly to the pharynx, having long since forgotten its function. The removal of the growth, which was of considerable size, afforded some relief, and as hypertrophies were reduced by local medication and the galvano-cautery, satisfactory progress was made. Though no attempt has been made as yet to operate on the deviation directly, manipulation of it twice or thrice daily by the subject himself, shows considerable alteration of its outlines. Meantime the palate has gained some tonicity, and breathing is carried on by the nose almost entirely. Snoring at night also has ceased, and the voice, some months ago, was sufficiently recovered to fill a large church at a crowded service. These disabilities, however trifling they may appear to the casual observer, may be, as in this gentleman's case, sometimes a serious obstacle to preferment. The health also suffers from the exertion necessary to make one's self heard from the pulpit; the naso-pharyngeal cavities ceasing to be resonators, much greater pressure is necessary to produce voice.

These cases have been briefly referred to for the purpose of showing how various and serious may be the consequences of internasal pressure, and how speedily and easily measures aimed in the proper direction may give assurance of relief and cure.

For the relief of deflection or deviation of the nasal septum a variety of means have been from time to time suggested, but it is practically only in cases of the vertical form that operative interference is either urgently called for or likely to be of value. The method (Ingalls', of Chicago) that most commends itself, both from its simplicity, as also its successful results, is that in which the mucous membrane of the deviated side and the cartilage are carefully divided in a triangular manner, the apex being upward, the cartilage dissected from the mucous membrane of the opposite side and removed, the septum being brought into line with pliers, and the divided mucous membrane held by sutures and a pad of some soft antiseptic material. The resiliency of the cartilage is such that a portion must be removed equal to the redundancy, in order to acquire a straight line. Of the many punches introduced but one seems to me to fulfil all the requirements, and at the same time to be comparatively free from fault. It is one (Sajous', of Philadelphia) in which a blade can be fixed at any desired angle, and the septum divided through from side to side, and straightened by allowing overlapping, or the excess may be removed and the cut edges placed in line and held by plugs until healed.

All the operations whereby openings between the nostrils were caused are unwarrantable, as forming a space for the accumulation of dried secretions. It is not unusual to find nature performing the operation of removal of the deviation by setting up ulceration and necrosis of a portion of cartilage of the size of a sixpence, or even larger. When this occurs pressure only is relieved, and no appreciable gain is secured the nose as an air-passage.

Ecchondrosis and exostosis are of not uncommon occurrence, and are capable of removal by scalpel, saw, or pliers, but more nicely by means of the surgical engine and burr; no violence is used, pain is trifling, and the time occupied in performance is very brief.

Hypertrophy of the turbinated bones, if very considerable, is also best reduced by the drill attachment, afterward crushing down and washing out the debris. The hemorrhage is slight compared with that resulting from the use of gouges and other means of destruction. Hypertrophy of the soft tissues, with or without dilatation of the venous sinuses, whether partial, general, temporary, or permanent, has for many years been looked upon

therapeutically as a most unsatisfactory complaint. When chronic, it has generally been termed hypertrophic catarrh, and when acute, hay-fever, summer catarrh, coryza, and so forth. The various methods adopted for the treatment of either the chronic or acute variety have been eminently unsatisfactory, more especially was this the case in the latter.

In the chronic variety caustics were employed, whereby large areas of tissue were destroyed, and great and prolonged pain ensued, or the actual cautery was introduced through the nostrils and applied so as to form deep sloughs, depending upon the cicatricial contractions for a cure. In the acute form the use of various lotions and pigments served the purpose of cleansing the tissue, with little or no effect in shortening the duration or preventing a recurrence of the attack.

Independently of the pain and risks attending the employment of caustics in the nose, the function of the organ must be somewhat interfered with if much of its lining membrane is destroyed, and on the latter ground alone recourse to these means is somewhat questionable. The actual cautery as well as the thermo-cautery present the not unimportant drawbacks that they must be heated before being introduced, and unless both patient and practitioner are uncommonly steady, and the passage less tortuous than usual, more parts will be brought in contact with the heated instrument than desired.

In the galvano-cautery, on the contrary, we possess an appliance that answers all possible requirements. It is under perfect control; it does not destroy needlessly; it is not heated until in contact; it is comparatively painless, and if employed with ordinary care it need be followed by no evil consequence.

The method of employing it in the chronic variety is somewhat thus: After introducing the knife as far back as possible, to turn on the current, drawing the electrode slowly forward, steadily pressing its cutting edge against the hypertrophy, thus scoring the tissue. This may be done several times at each sitting. The good effects that follow are not only the result of the contraction of the mucous membrane, binding down, as it were, the enlarged venous sinuses, but also the dividing of a number of minute superficial vessels bloodlessly at each passage of the knife, while at the same time but little sacrifice of tissue is engendered.

In the acute variety the procedure is somewhat different, and for this reason: in those so-called cases of hay-asthma, or hay-fever, there exists an unnatural excitability or hypersensitiveness of the nasal mucous membrane, and it is necessary to first allay that before scoring. This is best accomplished by passing the flat of the knife as freely as possible over all the lining membrane within easy reach, and thus proceeding to incise deeply in a linear manner as before described. That summer catarrh has no *peculiar* relation to either the pollen of hay or of the rose, or to any other spore or animal exhalation, is now pretty well acknowledged. If any additional proof be needed to strengthen this view, it may be found in the fact that all manner of treatment based upon the spore theory, heretofore introduced, has ignominiously failed, and the treatment by galvano-cautery has been as uniformly successful.

The beneficial effect of high elevations in this sadly misunderstood complaint is not that it frees the membrane from contact with irritating substances, but may safely be attributed to the influence a rare atmosphere has in unloading the local apoplexy, thus rendering the membrane less irritable. I have had under observation a case where a lady, the subject of hay-fever, thrived amid four hundred acres of timothy, and on returning to the city was forthwith attacked by her old enemy.

Of the various tumors likely to be met with in the naso-pharynx as obstructions to nasal respiration, there may be mentioned the gelatinous, polypous, and the fibroid —the former very common, the latter rather rare. The usual method of removal of the myxomatous variety by forceps is somewhat objected to popularly, especially if it has been once undergone. The forceps oftentimes is the best means, however, of reaching the growths, excepting perhaps the various snares, properly curved and armed with a special wire. These snares can be introduced painlessly, and the growth engaged in the loop, gradually working up its pedicle and running it close to its attachment. An application of the galvano-cautery now will prevent any likelihood of return. The fibroid tumor, though capable of removal by the forceps, can be best cut through at its origin by the galvano-cautery wire ecraseur, and whatever pedicle remains may be effectually destroyed by an application of the electrode. A simple method in the myxomatous variety is to pass the knife through and sear up the body of the tumor, thus exposing the pedicle to view, and leisurely proceeding to cut it from its attachment with the same instrument. This method has also the advantage of being painless.

One peculiar feature I have observed is the difficulty, and, I may say, the danger, attending the use of anæsthetics in subjects of nasal or naso-pharyngeal tumors, when nasal breathing is impossible or very difficult.

M. A. C—— came under notice December, 1882, complaining of suffocative attacks on retiring for the night. On examination of larynx, congestion was found; pharynx also involved in the hyperæmia. A posterior rhinoscopic examination was impossible, owing to spasmodic action of velum and attacks of difficult breathing. Anteriorly, nares were found congested; anterior illumination showed at posterior orifices a white, glistening surface, visible through both nasal passages. A probe passed was opposed by a partially yielding body, preventing the further passage into the vault. This difficulty was reinforced by recurring spasm of the soft palate packing up the space. Tumor was diagnosed. All efforts with forceps used posteriorly were rendered futile by the spasmodic action of the velum and choking on the part of the patient. Snares were borne heroically, but all attempts, even with the finger passed behind, were unavailing in engaging the growth, though frequently repeated. Education of the pharynx was equally unsuccessful. On June 7, 1883, assisted by my friend Dr. Roddick, chloroform was administered, and so badly borne that inversion and drawing out of the tongue, which had been swollen, were practised, the jaws requiring first to be forced open. Some minutes later, by passing my finger up behind the palate and directing the palmar surface backward, I succeeded in forcing the tumor against the pharyngeal wall, and by steady pressure downward tore it from its attachment. Bleeding was very free. The growth proved to be a fibroid, and was on its anterior surface bilobular, intimately adapting itself to the nasal orifice, while posteriorly it was spherical, giving a cast of the vault.

The galvanic cautery was applied under chloroform (which was now well borne) to the base of the tumor.

An examination a year afterward developed no recurrence. The principal difficulty was referred to the left subclavicular region, and flattening was undoubtedly present, but no sign of dulness or other organic change was observed.

A second case, W. M——, male, aged seventeen, was referred to me at the Throat Clinic of the Montreal General Hospital, by Dr. Roddick. In this case the right nostril was the seat of attachment. The tumors showed from the anterior nares, and the auriscope and finger developed the fact of extension into the pharyngeal space. They were found to be attached to the middle turbinate. Two were removed by forceps anteriorly, and the third and largest one was pried backward as described in the former instance. Bleeding was free, but easily arrested. These growths gave rise to difficult breathing and asthmatic attacks, with occasional bronchitis, for over two years. The cautery was used a week later to the field of attachment.

Œdema of the septum, diagnosed by rhinoscopy, is easily overcome by either passing a long needle, made for the purpose, through all tissue necessary for removal, and afterward passing the cold wire down over and cutting through; but still more simply and expeditiously with the galvano-cautery knife, one or two sittings accomplishing the task painlessly and effectually. Overgrowth of the erectile tissue of the lower turbinated bone sometimes causes an obstruction to breathing, acting almost after the fashion of a valve at the posterior orifice of the nasal passage. I have removed a pair as large as small plums, that were the provoking cause of one of the most severe attacks of asthma I have ever seen. For the removal of these bodies the cold wire straight écraseur is best and most satisfactory, although using the curved electrode from behind the velum has answered well when from deviation of the septum or other causes a snare could not be passed by the anterior nares.

Adenomata of the vault may greatly obstruct nasal breathing, and need instrumental interference. In early childhood, when they are soft and numerous, they can generally be easily scraped off with the finger-nail. In the adult they become more tough, when forceps, snares, or the hooded galvano-cautery, become necessary. These growths are very common, and are very frequently associated with hypertrophy of the buccal tonsil. They may be looked upon as the result of anterior nasal disorders, and secondary to them. The tonsil of Luschka tends to atrophy at adult life, unlike the buccal tonsil, so that we may safely and truthfully say, in so far as the Eustachian tonsil is concerned, that *the child will outgrow it*, a statement often—unfortunately too often for the well-being of the child—made use of with regard to the buccal tonsil. The buccal tonsils, when hypertrophied, offer an obstruction to nasal respiration often more by their backward pressure on the posterior palatine pillars than by reason of their bulk. When the enlargement is very great, both oral and nasal breathing is impeded; this is the cas · especially in the recumbent position.

In 1828 Dupuytren noticed the frequency of chest deformity in cases of enlarged tonsillar glands. Chassaignac, in 1843, observed that although increased effort of the diaphragm neutralizes to a certain extent the impediment to respiration offered by enlarged tonsils, there are frequent intervals when the power of this muscle becomes temporarily exhausted, and the oxygenation of the blood is very incompletely performed.

Both these observers attributed the ill effects of enlarged tonsils to the fact that they impeded the entrance of air into the lungs, and not to the real cause, namely, the prevention of air entering the lungs from the nasal passage above. The pharynx is sufficiently spacious to admit of a volume of air much greater, even if seriously obstructed by enlarged tonsils, than could possibly pass through the narrow anterior and posterior nasal orifices.

The spacious mid-chambers of the nose were intended for the purpose of preparing atmospheric air for healthy lung respiration, and have no influence whatever on the quantity capable of being transmitted through the nasal passages. As to the wisdom of the so-called extirpation of the tonsils, when they act as mechanical impediments to respiration, there seems to me to be no doubt. The various fears entertained concerning the influence of their ablation on general development are purely chimerical.

I do not think I exaggerate in saying that in one hundred and forty-two tonsillotomies performed by myself the patients or their friends had reason to regret the results obtained by its performance. Surgical interference is the only means of satisfactorily getting rid of these abnormal growths, and it has seemed quite safe in its performance. I have had one hemorrhage, not a very severe one, more the result of the obstinacy of the patient than of the operation. The tonsillitome is the safest, best, and most expeditious means of operation, and an instrument after Physic's pattern is much to be preferred. Rest in the recumbent position should be enjoined for four or more hours afterward. Crushed ice should be used freely, and an astringent of tannic and gallic acid applied. Bearing in mind the possibility of hemorrhage, and taking the precaution for the prevention of it, will surely go far to render the liability to it, however little, less.

It is generally but not always necessary to remove both tonsils. A curious fact, call it a coincidence if you will, observed during the last epidemic of diphtheria was, that in not less than three subjects in whom it had been necessary that but one tonsil should be removed, no exudation occurred on the surface of the ablatized tonsil, and but very little in its vicinity. This was very well marked in one case, a very severe one, which was seen daily by Dr. Browne and myself for a period of over three weeks. The membrane, though uniformly spread over both sides, avoided entirely the cicatrized surface, and yielded much more readily in its neighborhood. Possibly the relief of the parts from the irritating presence of the enlargement had some influence in this direction.

In conclusion, I may be permitted to say, and it is a verdict that has not been arrived at hastily, that the very best means possible for preserving a healthy chest and throat are to be found in nasal respiration. In fact, a being who breathes as nature intended should not suffer from any throat affection, or at all events should enjoy considerable immunity therefrom. Bronchial asthma is most common in mouth-breathers, and mouth-breathing is as hereditary as asthma. I do not go too far when I assert boldly that a healthy state of the lining of the pharynx, larynx, and lungs is incompatible with any form of respiration but the nasal. I have thus briefly and incompletely endeavored to draw your attention to what I am free to consider one of the prevailing disorders of the day. I do not claim to have announced anything new, but rather to have emphasized our duty to society in regard to this most important but elementary point.

Nephrectomy for Calculous Pyelitis.—Dr. A. Salomoni (*La Gazetta degli Ospitali*, August 31, 1884), reports a case in which Professor E. Bottini, of Milan, successfully removed the kidney. The patient, aged twenty-seven, had had two calculi removed by lateral lithotomy fifteen years previously. Three years after that operation an abscess formed in the right iliac fossa. It opened spontaneously, and after a few months reappeared in the lumbar region, when it was opened with caustic potass. A permanent fistuala resulted, and proved intractable to all local and constitutional treatment. The patient lying on the left side, under chloroform, Professor Bottini, under strict antiseptic precautions, made a vertical incision through the whole ilio-costal space, three inches outside the quadratus lumborum. The kidney having been isolated, the renal artery was secured in one ligature, the vein and ureter in another. The space having been well cleared and all bleeding stopped, a drainage-tube, about one-third of an inch in diameter, was introduced. The walls of the fistula were excised, and the wound united by one deep metallic suture and eight superficial silk ones. The operation lasted a little over an hour. The antiseptic dressing was renewed daily, the metallic suture was removed on the third, and the silk ones on the fourth day, when the drainage-tube was shortened. It was withdrawn on the eighteenth day. Progress was uninterrupted. The highest temperature, 99.5°, was reached the second day; urine in normal quantity and without deposit was passed without pain or trouble. The patient left his bed on the sixth, and went home the eighteenth day, when only a slight sinus remained, about an inch deep. The fistula led into the pelvis of the kidney, which was dilated, with thickened and suppurating walls, and contained, beside some uric-acid sand, two small calculi about the size and shape of grains of barley.

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GEORGE F. SHRADY, A.M., M.D., EDITOR.

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ON THE LIMITATIONS OF THE KNOWLEDGE REGARDING CHOLERA.

IT is only by constant reiteration that knowledge is finally inculcated and public opinion affected. In this we find a justification for the frequent and discursive contributions to the subject of cholera which are at present filling the columns of the secular and medical press. The inquiring reader begins each article with fresh expectation of enlightenment. But all the knowledge of our most erudite sanitarians and eminent pathologists seems reducible to this: that cholera is communicable and portable, that it affects filthy localities and people, that rigid municipal and personal sanitation, and a discriminating use of quarantine measures should be enforced.

That there is some kind of a cholera germ all believe, but what it is none know. It has been very generally agreed that this germ requires a special nidus for its development, that for the spead of cholera there must be a something which has been called "epidemic constitution." But modern sanitary reformers assert that this so-called "constitution" is only an intensity of filth. In the city of Hygeia there are no epidemic constitutions. And such is the safest practical view to take, whether it be an absolutely true one or not.

As for quarantine, some dissenting voices here echo the English opinion as to its non-utility. We had best go, however, by what our past experience has taught us, and that is, that quarantine is a valuable means of protection. It should be applied sensibly and with discrimination, however, and should bear most of all upon the immigrants, who have heretofore been the primary dispensers of the hypothetical bacilli of cholera in the United States.

The cholera germ may be positively discovered any day, meanwhile Koch's bacillus theory has not, as was first hoped, thrown any flood of light upon cholera problems, and as for its prophylaxis it is still expressed in these three phrases: *Rational quarantine, municipal cleanliness, personal hygiene.*

REGULATING MEDICAL PRACTICE IN MISSOURI.

THE stirring attack made some time ago by Dr. King upon quackery in Missouri has already borne fruit. The State created a board of health in July, 1883, and gave to it a certain amount of power in regulating medical practice and putting down quackery.

The provisions of the law are much like those of Illinois, and it contains the "itinerant quack" section compelling travelling venders of nostrums and persons publicly professing and advertising to cure disease to pay a monthly license of $100 Attempts to enforce such a section naturally create some trouble, and we learn from the Kansas City *Medical Index* that the efforts of the State Board to enforce the law in that place have been violently opposed by the quacks and the public press—two social forces which often work harmoniously together by reason of the profits of advertising.

The *Index* puts the matter very fairly: "The law calling into existence the Board and also governing its action was enacted for the benefit of the public, and not for the benefit of physicians, as some of the papers try to represent. These papers receive large amounts of money from these pretending doctors for advertising, and hence they cry out because their ox is gored."

We would remind the *Index* also that the creation and enforcement of regulating laws is based not only upon the need of protecting the public health and of purifying the medical body, the State of Missouri obliges medical men to report all births and deaths, thus giving to them an official duty and in a measure an official position. The State, on this ground, can rightly insist on passing upon the qualifications of its medical practitioners.

THE MEETING OF THE NEW YORK STATE MEDICAL ASSOCIATION.

THE New York State Medical Association held a pleasant and harmonious meeting in this city during the past week. The attendance was very good, especially of out-of-town physicians. The medical contributions, though not destined to make new epochs in science, were, many of them, of excellent character and likely to reflect credit upon the State. Indeed, it is a matter of some pride to New Yorkers to find that the State can creditably support and contribute to two organizations.

New York City is a pleasant and alluring place for medical meetings, and so long as the Association assembles here, and does good work, it will receive support from and be a source of benefit to its members. The issue which started it is already nearly forgotten, and sensible men recognize that its practical significance is now trivial. It is not upon any point in casuistry that the Association can stand or hold together, but upon its merits as a medical society.

THE UTILITY OF QUARANTINE IN CHOLERA.

DR. JOHN H. RAUCH takes the view that cholera is preeminently a quarantinable disease, because "no single case of cholera, no one shipload of cases has ever yet sufficed to establish an epidemic of Asiatic cholera on this continent. It has only been after repeated importations of the contagion in the persons of thousands of immigrants and in their infected baggage and household goods that it has effected a lodgment, and has reproduced itself and multiplied into an active epidemic agency."

In proof of this he cites the history of previous epidemics of cholera in this country. Dr. Rauch appears to forget, however, that, even if his facts are correct for the United States, in the past they do not fit the history of

cholera elsewhere. And the proposition that an epidemic of cholera can not be started by a single case is utterly untenable.

For all this cholera is undoubtedly quarantinable, and if Congress will do its duty there is a good chance that the disease may be kept from us.

News of the Week.

Death of Dr. Samuel M. Bemiss.—We regret to announce the death on November 17th of Dr. Samuel M. Bemiss. He was Professor of the Theory and Practice of Medicine and of Clinical Medicine in the University of Louisiana, and during the epidemic of 1878 was the representative of the National Board of Health in New Orleans. He was sixty-three years old, and served as a surgeon in the Confederate Army. He was a graduate of the medical department of the University of New York.

Cholera and Rags.—Experience shows that cholera has been brought to this country heretofore by passengers, and especially immigrants and their baggage. It is very certain, however, that the disease can be carried by rags and this source of danger ought to be carefully watched. A complete embargo on rags from all ports or even a compulsory disinfection of them is unnecessary.

State Medical Association Notes.—It may happen that the New York State Medical Association, which met in this city during the present week, will prove to be an agent of value to the State Society and the profession at large. At least the Society may learn from it several lessons. One of these is that New York City is an excellent place in which to hold annual medical meetings. Taking it all in all, the means of reaching it are as good, if not better, than those of reaching Albany, while the accommodations and general attractions are superior.

The Association has shown also that by energetic work papers can be obtained from physicians all over the State, and that the bulk of the literary work need not fall upon New York City.

As for the Association doing any injury to the State Society, this is not to be thought of, and is not probably intended except by the embittered few. The rural practitioners throughout the State recognize the slight practical importance of the ethical issue, and feel no ill-will toward the Mother Society, which has what the Association has not, a past. Perhaps this is in no way better shown than by the indifference felt toward the fact (for it is a fact of which there is absolute proof) that the President, Dr. Didama, has consulted with homœopaths, excusing the practice under the disingenuous plea that he treats the homœopaths who call him in as nurses.

The papers read at the Association were in many cases too long, and little chance was given for profitable discussion. The question of section meeting was naturally raised; it is one that the State Society has considered and will doubtless have in time to adopt.

Dr. Samuel A. Fisk, aged sixty-three, ex-President of the Massachusetts Medical Society. Lecturer at Smith College, and Trustee of the Clarke Institute for Deaf Mutes, died at Northampton, on November 16th, of organic disease of the heart.

Pennsylvania Hospital.—On November 10th, says the *Philadelphia Medical Times*, a notable ceremony was held at the Pennsylvania Hospital, the occasion being the restoration, after an absence of fifty years in another department of the institution, of the celebrated picture of Christ Healing the Sick in the Temple, which had been originally painted for and presented to the hospital by Benjamin West.

A Mistake.—Our usually careful contemporary, *The Boston Medical and Surgical Journal*, states that the New York County Medical Society unanimously voted to admit to membership two homœopaths. This is a mistake. The gentlemen in question have distinctly renounced dogmatic homœopathy.

Death of a Physician from Self-Administration of Chloroform.—It is a practice which we fear is not very uncommon among physicians to inhale chloroform when suffering from severe pains. The *Weekly Medical Review* reports the death through this practice of Dr. C. M. Whiting, of Ogle County, Ill. Reference is made also to the death some years ago, in a similar way, of a young physician who had just graduated and was practising in the suburbs of Chicago.

The Cholera in Paris.—Cable reports show that from forty to fifty deaths from cholera occur daily in Paris. This represents about one hundred cases daily, and indicates a considerably less prevalence of cholera than often exists of diphtheria, or typhoid fever. There is no panic, and the disease at date of writing is declining.

A Crematory for New York.—The corner-stone of a crematory temple was laid at Mount Olivet, Long Island, on November 20th. The proposed edifice is being built by the United States Cremation Company, which expects to complete its work by February next. Twenty bodies already await incineration. The cost of the building is about $10,000, that of incineration $10 to $25. The building is in the shape of a Greek temple 40 by 72 feet. Incineration will take place at a temperature of about 2,500° F. It will require about forty minutes per hundred pounds of the subject, and will leave about four per cent. in weight of a pure pearly ash. No smoke will be visible and no odor perceptible during incineration. The basement will also contain a *refrigidarium*, where bodies may be kept when desired awaiting the arrival of friends from a distance; also a *calidarium* for cases of possibly suspended animation, the high temperature of which will induce speedy evidences of life or death, as the case may be. There will be, also, in the basement an *ædicularium*, or urn room, and an atelier. This last will be used, also, for making autopsies, which will be required in all cases wherein it is not clear that death is the result of natural causes. The body of the building, or the ground floor, will be fitted up as a chapel, where any service desired may be held.

A Contribution Toward the Medical Education of Women.—The Calcutta Medical College has received from the Maharani Surnamayi of Cossim Bazaar, Moorshedabad, one of the millionaires of Bengal, a lakh and a half of rupees, $75,000, toward the scheme for providing separate classes for female medical students at the College, and has promised to increase the gift to eight lakhs ($400,000), should a separate college be provided.

Reports of Societies.

NEW YORK STATE MEDICAL ASSOCIATION.

First Annual Session, held in New York City, November 18, 19, and 20, 1884.

TUESDAY, NOVEMBER 18TH—FIRST DAY—MORNING SESSION.

THE Association was called to order at 9.45 A.M., by Dr. Gouley. The Secretary announced the registration of Fellows. The Chairman of the Committee of Arrangements, Dr. Gouley, then welcomed the Association in a short address.

THE PRESIDENT also delivered an address, and announced the following as the Committee on Scientific Contributions: Dr. E. S. F. Arnold, of New York County; Dr. Simeon T. Clark, of Niagara County; Dr. William Gilles, of Franklin County; Dr. George W. Avery, of Chenango County; Dr. J. C. Hannon, of Rensselaer County.

The Secretary then read the report of the Council, and on motion of Dr. Arnold the report was adopted.

Representatives from the Vermont Medical Society and the Pennsylvania State Society were received.

The annual report of the Treasurer was made and accepted.

The special committee on the organization of district associations reported in favor of the establishment of five such associations. After some discussion the report was adopted.

THE ADDRESS ON SURGERY

was then delivered by DR. E. M. MOORE, of Monroe County.

The object of the paper was not to enumerate all the late discoveries in surgery, but to dwell upon a few facts in connection with transfusion of blood. Various methods of transfusion have been proposed, but none have given general satisfaction. When first discovered great expectations were founded on it, but on account of some unfortunate accidents the practice was condemned. That it has great value cannot be disputed. All surgical practices to be successful must be simple. Complicated apparatus is to be discarded and some simple surgical device instituted. In 1657 Sir Christopher Wren suggested the possibility of this practice. At first it was tried only on animals. These experiments were the natural outcome of Harvey's discovery. Some denounced the practice as legalized murder. After 1668 the interest seems to have disappeared. Up to 1819 only arterial blood was used, but since, all kinds have been employed. The blood of those species nearest of kin has been most successfully used. Transfusion from the lamb to man has been more or less successful, but blood obtained from the same species answers best. We cannot obtain arterial blood from human beings, and hence must take venous. To avoid danger from coagula, defibrinated blood is sometimes used. The question was raised whether this was true blood, and answered in the negative by the author. Various medicated substances have sometimes been used, but blood answers best. The distention of the vessels by simple saline solutions has at times given temporarily great benefit. The principal dangers of transfusion are from ingress of air and formation of coagula. The special point made by the author was that the time of operation should be short and definite. Most operators take from two to three minutes. *The operation should never exceed the limit of one minute.* There is a period of transition from normal blood to abnormal during the passage through the canula, hence the absolute rule of shortness of time. An assistant should read off ten seconds, twenty seconds, thirty seconds, etc., during the operation. The transference of venous blood is a difficult problem. A longitudinal slit should be made in the vessel and the syringe held perpendicularly. The writer then exhibited a canula and mandrel devised by himself, which has been successfully used. By rounding the edges coagulation is prevented. The instrument can be extemporized in case of emergency by using a goose-quill for a canula. Dog's blood coagulates quicker than human blood, but the author had succeeded in experiments with his instrument upon the dog. Transfusion is especially indicated after sudden great losses of blood, and in anæmia from exhaustive discharges. It does not seem to avail in the exhaustion from phthisis and like diseases.

DR. TOWNSEND, of Genesee County, opened the discussion by narrating an instance in which Dr. Moore and himself had practised transfusion in fifty seconds. The operation was successful at the time, but the patient afterward died of exhaustion. It was then moved and carried to postpone the further discussion until after the reading of Dr. Hutchinson's paper on transfusion.

DR. DETMOLD, the president of the County Medical Association was then introduced to the meeting. He stated the objects of the Association and announced the titles of the papers that had been read during the past year. It was carried to transfer these papers to the Council of the State Association.

A recess was next taken, during which there were meetings of the five district associations, in which the time and place of next meeting were appointed and secretaries named.

AFTERNOON SESSION.

The Association was called to order by THE PRESIDENT, who remarked that it might be necessary, owing to the large number of papers announced, to divide the work between two sections, a medical and a surgical. This would be determined by the members during the present session.

The first communication was by DR. J. C. HUTCHINSON, of Kings County, upon

TRANSFUSION.

Although this operation had been practised five hundred years ago, it was still but rarely undertaken, and had certainly not fulfilled its early promises of utility and ready applicability. The present epidemic of cholera in Europe has invested the subject of the transfusion of blood and other substances with fresh interest, and the author believed that the procedure might now become popularized were the means of its application simplified, the dangers diminished, and the apparatus improved. An instrument was then exhibited which seemed to fulfil the indications of simplicity and ease of management. It consisted of a glass cylinder, terminating below in a perforated metal cap, and above in a rubber stopper through which was inserted a thermometer. The side of the cylinder was marked off in sections of half an inch. Surrounding the cylinder was a double rubber jacket with a slit on one side to permit a view of the markings on the glass. This rubber jacket was to be filled with hot water (of 140° to 150°) in order to keep the injecting material warm. A rubber tube is fastened to the lower end of the cylinder by one extremity, the other extremity being attached to a canula. This canula is provided with a stop-cock by means of which the rapidity of flow of the transfused material is regulated. The author had not seen the instrument exhibited by Dr. Moore before writing his paper, but thought it excellent, and should himself always use the canula there shown.

It was formerly supposed that the reviving power of transfused blood lay in its corpuscles, but this has been shown to be erroneous, for the corpuscles are quickly destroyed. Recent experiments have demonstrated that the principal thing necessary is to restore the volume of the circulating fluid. The danger after hemorrhage lies in the disturbed relations of the blood-vessels to their contents, hence it is not necessary to employ blood, and indeed a saline solution is preferable. Experiments have shown that the blood of another species, when injected

into the circulation, may cause acute nephritis and imperil life. Milk is objectionable, for the undigested casein when transfused into the blood is unassimilable, and the butyric elements may give rise to chyluria and other disturbances. Experiments made upon animals bled to syncope have shown that consciousness could be restored and life preserved by the injection of simple saline solutions, and the value of this material for transfusion has also been demonstrated clinically. The author quoted the statistics of the transfusion of saline solutions, and related five cases in which he himself had employed this method in the resuscitation of cholera patients. All the patients were in the stage of collapse, indeed were moribund. The temporary effects of the transfusion, however, were most marked, although all the patients eventually died.

The temperature of the solution should be not lower than 98.5° and not above 105°. The quantity used should be from twelve to twenty-four ounces. But one of the most important points in the operation is the rapidity with which the fluid is allowed to enter the vessels; the rate should not be above one ounce a minute. The median basilic vein is usually selected to receive the transfused material, though lately arterial injections have been urged as offering equal facility, and obviating the chief danger of embolism of the brain (since all organic particles or clots are detained in the systemic capillaries), of the entrance of air, or of overpowering the heart by a sudden afflux of fluid. In concluding, the author said that if the results already obtained by transfusion should be confirmed by further experience, the operation was one deserving of more honor than it had as yet obtained.

Dr. Rochester, of Erie County, related a case in which a speedy and permanent improvement had followed upon the transfusion of less than two ounces of blood, and he thought that this demonstrated that it was not alone to the quantity of fluid that the good effects of transfusion should be referred, but that the nature of the material employed was also to be considered. He also had seen wonderful improvement following the injection of saline solutions in the stage of collapse of cholera, but these results were only temporary, for the patients invariably died.

The next paper read was by Dr. Alfred L. Carroll, of Richmond County, on the

DURATION OF CONTAGIOUSNESS AFTER ACUTE INFECTIOUS DISEASES.

The object of his remarks, the speaker said, was rather to direct his hearers' attention to the importance of studying this subject and recording their observations by the plan of collective investigation, than to present any certain data upon which they could yet base their conduct in any given case. The subject was one that had received but scant attention, and upon which there was but little unanimity of opinion, and yet a little consideration would show how important it was to be able to determine just when the isolation of a convalescent might with safety be removed. The author had addressed a communication to a number of well-known medical teachers and practitioners, in order to ascertain whether there were any consensus of opinion on this point, and he presented to his hearers a condensed summary of the answers obtained. As regards small-pox, nearly all of his correspondents were agreed that there was danger of contagion until all the crusts had been removed, although one stated his belief that there was little danger to be apprehended from the scabs on the palms and soles, provided there were none remaining on the other parts of the body. In respect to the other contagious diseases there was less accord. In typhoid fever and in cholera it was the general opinion that the contagion resided in the discharges, and that the danger ceased when convalescence had been established. Many of the correspondents, with whom the author also agreed, regarded filth-poison as of prime importance in diphtheria, and doubted the existence of a direct personal contagiousness. Yet one writer maintained that there was danger as long as any trace of inflammation remained. In measles one would release the patient from quarantine as soon as the fever and eruption had disappeared, while others would prolong the period of isolation to from one to three weeks after desquamation had ceased. The greatest diversity of opinion existed in regard to scarlatina. Many released the patients as soon as desquamation had ceased and a bath had been given; others confined them for a period varying from six to eight weeks. The author had found in some cases that no contagion occurred even when the children mingled with their playmates before the period of desquamation was over. He thought that this fact was to be explained by assuming that the last scales thrown off were not infectious, but were the expression of a secondary dermatitis, the scales first appearing being the ones that contained the poison.

Dr. John S. Jamison, of Steuben County, then read a communication on

CHRONIC INTESTINAL CATARRH.

The most frequent cause of this condition is an improper diet, as regards either quantity or quality. Another potent factor in the production of the disease is found in meteorological conditions—a prolonged high temperature or a change to cold, damp weather. It may arise from impaired stomach digestion, from disease of the liver or pancreas, or from any condition causing obstruction to the portal circulation. The malarial poison is another occasional etiological factor. An acute diarrhœa is often neglected and may then pass, after successive attacks, into a chronic intestinal catarrh. The symptoms of this condition are not always sharply defined, for diarrhœa is not necessarily present, and there may be no severe pain. There is often a dull sense of pressure and abdominal fulness. The author had frequently observed a displacement downward of the transverse colon, and he regarded it as a sign of considerable value in the diagnosis of this disease. Sometimes mucus, in coherent masses or even in the shape of intestinal casts, is passed at stool. In the treatment the author regarded pepsine and pancreatine as of great utility.

A paper by Dr. Frederick Hyde, of Cortland County, was read by title only, the author being absent.

Dr. Edward R. Squibb, of Kings County, then followed with a paper entitled

THE MODERN PROGRESS OF MATERIA MEDICA.

The author did not refer to the introduction of new remedies, now becoming so fashionable, but rather wished to consider the elements of progress in the treatment of disease among that large class of intelligent and practical physicians who read much but write little, but who are none the less good, sound, and sensible practitioners. The progress of materia medica among these men cannot be learned from their writings, since they do not write, but is to be judged of by knowing the drugs which they order and use. Medical men now realize the fact that their success in their profession depends upon their utility to the public; they must direct their energies to the prevention of disease, to its management when it occurs, and to the reparation of its ravages. The physician does not now rest content with a diagnosis, but seeks as far as he may to conduct his case to a successful ending. We hear less and less of expectancy in the treatment of disease; indeed the danger now is of rushing into the opposite extreme by trying all the new remedies that are spoken of. The author pictured the armamentarium of a physician in one of the new Western towns; this consists of a thermometer, urinometer, litmus paper, often a plain serviceable microscope, and sometimes even a sphygmograph. He has a good selection of some twenty or thirty of the standard remedial agents, but few non-officinal drugs are found in his stock. More pharmacopœias are sold now than formerly, and physicians are

learning to make their own tests and to judge for themselves of the purity of the drugs supplied to them. Few physicians nowadays undertake "cures," but they endeavor to conduct the disease to a successful issue. Few believe that drugs cure diseases, and hence they seek to manage their cases according to the indications as they arise. Another advance that has been made in the last few years is, that practitioners are learning to throw off the trammels of arbitrary doses. They now look only for *effects* from remedial agents, and they accordingly push the drug until they obtain these effects. The use of indicating doses for drugs, the writer thought, will in the future be only to show where we are to start in their administration, the stopping-point being different in different cases, and to be determined only by observation of the effects produced. Physicians use fewer drugs than formerly, but those that they do use are more effectual. The combination of many agents in one prescription is less frequently resorted to. The form of the agent now used is also worthy of note. The dilute and uncertain preparations are being called for with less and less frequency, and the fluid extracts, as the most concentrated and most reliable forms, are growing daily in favor. There is, however, a tendency to the use of alkaloids, of the so-called active principles of drugs, which the author did not approve. The active principles so-called, he maintained, are not the same as the drug, for they are often produced by some chemical change occurring in the course of their manufacture. They are furthermore not always permanent, but are liable to split up and form new chemical compounds with totally different effects. Thus, the author concluded, although in the main the progress has been in the right direction, yet not all the changes of late have been improvements.

Dr. W. H. Robb, of Montgomery County, read a paper on the

MANAGEMENT OF CRIMINAL ABORTION.

Control hemorrhage as soon as possible with ergot and digitalis given hypodermically and in full doses. Stimulants should be given by the same method until the patient has rallied. The ergot should be given as soon as the patient is seen, and should be continued until the uterus has contracted and the ovum has been entirely removed. Locally, various astringents, as ice, tincture of iodine, hot carbolized solutions, and other remedies, may be used. When these means fail to control the hemorrhage, the tampon should be introduced. The tampon should be removed every six hours, and its removal should be followed by a hot carbolized injection. The injections are best given by introducing a soft rubber tube into the uterus. The Fountain syringe is the best, as by its use no force can be exerted and no air can enter the organ. The womb should be emptied as soon as possible, so that all danger of decomposition may be prevented. The safest and most efficient instrument in removing the ovum is the finger. If the cervix is not dilated, tents should be used. The removal of the ovum should be followed by a hot douche.

Dr. Vandewaker, of Syracuse said the danger in abortion before the third month is due to loss of blood and poisoning from decomposition. He had never seen a good result from the use of ergot in criminal abortion. The machinery of the uterus is not fully developed before the third month, hence the uterus does not contract firmly, but spasmodically. If the physician is called late at night, and no other means are at hand, the tampon may be used; but it should never be used unless absolutely necessary. The quickest way to stop the hemorrhage is to relieve the uterus of its contents.

Dr. Moses C. White, of New Haven said the action of ergot in abortion at the third month is not to expel the contents, but to contract the uterus and thus prevent its expulsion. He uses ergot, not to bring on but to prevent abortion.

Dr. Sabine, of West Point, explained the dangers of using the tampon, and gave the history of a case of rupture of the fundus of the uterus, followed by the death of the patient, due to its use. Tampons are very dangerous unless used with great caution.

A paper on

INTESTINAL OBSTRUCTION,

by Dr. Avery Segur, of Kings County, was then read by title.

Dr. Charles Bulkley, of Monroe County, read a paper on

CHRONIC MERCURIAL POISONING.

He presented the history of a case in his own practice in which the poisoning was due to wearing a hard rubber plate with false teeth. All the symptoms were present while the plate was used, but disappeared when its use was discontinued. He also presented the histories of several other cases due to the same cause.

Dr. R. H. Sabin read a paper on

A CASE OF ACUTE LEAD POISONING RESULTING FATALLY.

The case was that of a young man who was poisoned while working in a paint shop. There was a rapid infusion into the brain, causing insensibility, and this was followed by a peculiar algid condition.

The session then adjourned until evening.

Evening Session.

Dr. H. E. Mitchell, of Rensselaer County, read a paper on

ERRORS OF REFRACTION, THE IMPORTANCE OF THEIR RECOGNITION AND CORRECTION IN EARLY LIFE.

Defects of eyesight due to errors of refraction are on the increase. A description of the coats of the eye and the contents of the ball was then given. Myopia may be acquired or congenital. Statistics show an increase of the congenital form. The acquired is the most important to consider. The minus or double concave glass should be used. Myopia in young persons shows a tendency to increase.

Dr. E. D. Ferguson, of Rensselaer County, read a paper on

THE USE OF THE ASPIRATOR IN HYDROTHORAX.

A case was cited in which after several aspirations were performed for pleuritis, empyema set in. The author has had three such cases. He now abstains from aspiration unless the dyspnœa is extreme. When the operation is performed only a slight amount of fluid should be abstracted. Since following this rule, he has not had a case of empyema in practice. The innocuousness of the operation is assumed by most text-books, the only warning being to stop when there is constriction at epigastrium. By suddenly emptying the chest of fluid, support is taken from the vessels, which results in increase of blood with resulting tendency to suppuration. Eight ounces is the greatest quantity that should be taken at one time in pleurisy.

Dr. Thomas F. Rochester, of Erie County, next read a paper entitled

A NEW PROCEDURE IN PARACENTESIS THORACIS.

The histories of three cases of empyema were given, in all of which there was great difficulty in enlarging the incision sufficiently to hold a tube. The doctor has found that by inserting his finger into the incision and thus enlarging the opening, all such difficulty is overcome.

Dr. Austin Flint did not believe that the aspirator caused as much damage as claimed by Dr. Ferguson, although doubtless it sometimes did harm.

Dr. Moore thought that all surgical instruments occasionally did harm. In empyema the best practice is to draw off a little pus each week by the aspirator. In abscesses, the walls of which cannot contract, all pus should not be drawn out at once.

Dr. Rochester thought that from eight to ten ounces

were enough to take out at one time. He believes in the drainage tube, and has had no success with fistulous openings.

Dr. Feifield, of Boston, has used his finger to enlarge the opening in empyema for some time.

Dr. Austin Flint, of New York, read a paper on the

DIETETIC TREATMENT OF DYSPEPSIA.

Some authorities give the term dyspepsia as synonymous with the term indigestion; but he maintained that the term dyspepsia denotes an affection distinct from indigestion. He then gave the local or stomach and general symptoms of the affection. The appetite may be impaired, but is sometimes increased. The mind plays an important part in the etiology of the affection. The old method of treatment was to strictly regulate the diet, drink very little or no fluids, and always leave the table hungry. Such treatment is entirely wrong. Dyspepsia may be developed by the attempt to regulate the diet by rules intended to prevent the affection. I always ask a patient, Do you regulate your diet? and he always answers in the affirmative. I have never known a dyspeptic to get well who attempted to regulate his diet. Regulate by the appetite, the palate, and by common sense. A patient may ask, Am I not to be guided by personal experience and avoid such articles as I have found to disagree with me? I answer that personal experience is very deceptive. An article that would disagree to-day would agree to-morrow. Do not adopt the rules of eating only twice or thrice a day. Be governed by the appetite. Those articles are most digestible which are most acceptable to the palate. Do not leave the table hungry. Take animal and vegetable products, and drink according to the want of instinct. The diet which in healthy subjects is conducive to health is the best diet for dyspeptics. It is a fallacy to suppose that in dyspepsia the organs of digestion need a prolonged rest. Patients should not be afraid to rely upon their digestive powers. Perfect cures have been obtained by following the instincts of nature. Dyspepsia is most common in the better educated classes, because they endeavor to regulate their diet on scientific principles.

A paper on

DOUBLE SYNCHRONOUS AMPUTATIONS

was read by Dr. W. C. Lynde, of Erie County, in which he presented the statistics of a large number of cases.

The same writer then read a paper on the

FUNCTIONS OF THE AURICLES.

He maintains that the auricles do not contract, and that a suction force is exerted on the part of the right ventricle.

Dr. Austin Flint, Jr., said although the walls of the auricles are much thinner than the walls of the ventricles, they are composed of muscular tissue, and do contract. He had seen them contract many times in operations on the lower animals. In man there are no valves guarding the openings of the veins into the auricles. The contraction of the muscular fibres constricts the openings of these veins and prevents the regurgitation of the blood. He does not believe in the suction force of the ventricles.

Dr. Austin Flint, Sr., described the contraction of the auricles and the production of a heart-murmur which was caused by the contraction.

Dr. Moore, of Monroe County, described some experiments made by him and others in 1838, at a time when we knew little or nothing of heart disease. This was the starting-point of our knowledge of heart-sounds. The contraction of the auricles is as easily seen as the contraction of the ventricles. It requires simply to be looked at in order to be known.

Dr. Austin Flint described the jugular pulse as due to the contraction of the right ventricle and also to the contraction of the auricle. The presystolic murmur is due to the contraction of the auricle and is produced, not by a passive flow of blood from the auricle to the ventricle, but by an active force.

Dr. Ross related a case of rupture of the right ventricle, from which he argued that the force to produce this result must have been due to the contraction of the auricle.

The President asked

WHAT WAS THE USE OF HAVING A MUSCLE IN THE WALL OF THE AURICLE

if it had no action?

Dr. Lynde closed the discussion. He had many times experimented on different animals, by introducing a canula and trochar directly into the auricle, and had never seen the blood well up in the canula, while, when the same instrument is introduced into the ventricle, the blood is thrown to some distance. It would not do to have the veins empty directly into the ventricles.

Wednesday, November 19th—Second Day—Morning Session.

The Association was called to order at 10 A.M.

Dr. Gouley suggested a plan that the Association should have

A CITY HEADQUARTERS, A PLACE THAT COUNTRY MEMBERS COULD REGISTER AT.

This would include the founding of a library under the direction of the Council. There was already formed the nucleus of a library, and forty journals had been promised. He further suggested that a voluntary fund be started, to be divided into a library fund and a sinking fund, for putting up a building. This plan was put in the form of a motion.

Dr. Moore seconded the motion, and stated that the desirability of such a plan was obvious, although there might be pecuniary difficulties.

The resolutions were carried.

It was then carried that

THE LETTERS "F.S.M.A." PLACED AFTER A NAME IN ANY SCIENTIFIC PAPER SHOULD BE OFFICIALLY KNOWN TO REPRESENT THE ASSOCIATION.

Dr. S. B. Hubbard, of New Haven, and Dr. H. B. Ransom, of Iowa, were invited to sit as delegates.

Dr. Allen, of Rensselaer County, read a paper on

DIARRHŒA FROM DISEASE OF THE PANCREAS.

The history of a case was given that the doctor called

ADIPOSE DIARRHŒA,

in a man about sixty years of age. The stools were not very fluid, but contained matter looking like melted fat. There was pain at umbilicus and borborygmi just before the stools. The patient had three or four movements a day, the odor of which was unbearable. The fæces presented bundles of fasciculi surrounded by fat; appetite variable. Pepsine and pancreatine, āā. gr. v., t.i.d., and an opiate constituted the treatment. For diet, soft-boiled rice, milk, toast, and tea. Under this treatment there was less adipose matter in the stools. There was coldness of extremities noticed to be present. The patient improved, but had a relapse from eating pork. He grew rapidly worse, and sank into a deep stupor; urine partially suppressed, and an examination showed one-quarter part sugar, one-sixth albumen, with epithelium, hyaline casts, and broken down blood-corpuscles. The patient died in coma and no autopsy was permitted. The case was presented to the Association as a remarkable one.

THE ADDRESS ON OBSTETRICS AND GYNECOLOGY,

was delivered by Dr. T. Gaillard Thomas, of New York.

The author was asked to give an estimate of the present status of obstetrics and gynecology. Obstetrics has always existed as an art, but not as a science. William Hunter first elevated it to the position of a science. Since his time there has been a steady advance. One great advance has been the discovery of the relation of the low monads and micrococci floating in the atmosphere to diseased processes. This discovery has been of as great importance in obstetrics and gynecology as in general surgery. In the parturient process the open

mouths of vessels afford opportunity for the absorption of poison from without. In the near future, antiseptic obstetrics will probably be the rule. It never does any harm, and if only one life in a hundred should be saved, the extra trouble would not be unavailing. To free the parturient act from septic dangers will be to save millions of lives in the future ages. The germ theory has revolutionized the treatment of puerperal fever. Instead of quinine, opium, and poultices, antiseptic intra-uterine injections, containing bichloride of mercury or carbolic acid are now used. Quiet pain by hypodermics of morphine. Lower temperature at once, by a coil of running water. Give a milk diet and perfect rest. Extra-uterine pregnancy is now successfully treated by the fœticide power of the strong galvanic current. The early diagnosis and treatment of tubal pregnancy is becoming more satisfactory. The methods of inducing premature labor have become so safe and practicable that in placenta-prævia, uræmia, etc., it should be oftener resorted to. The obstetric forceps is the most life-saving instrument ever devised in surgery. There have been few real improvements in this instrument. Tarnier has recently made an improvement by adding tractors. Two substitutes have been employed in place of Cæsarean section: Porro's operation and laparo-electrotomy. The writer thinks the results of the latter operation are better and safer. A successful case by Dr. Pilcher was reported. The gynecology of the future will be more allied to surgery than medicine. Instead of applying caustics to an ulcerated os, the lacerated cervix is now sewed up. Trachelorrhaphy has done much good and will do more. Extirpation of the ovary for various causes is now legitimate and useful, although liable to abuse. In uterine deformity the forcible dilatation of the cervical canal is being tried. Among drugs the permanganate of potash is the best emenagogue.

Afternoon Session.

Dr. T. B. Reynolds, of Saratoga County, Vice-President, presided.

The first paper read was by Dr. Darwin Colvin, of Wayne County, on

venesection in the convulsions of pregnant and parturient women.

The speaker based his remarks upon a combined experience of his father and himself, extending over a total period of ninety-two years. Most of the cases recorded in his father's note-books occurred at a time when chloroform was unknown and before albuminuria was heard of, while his own cases belonged to a later period, when anæsthetics were in daily use, bleeding was out of fashion, and the pathology of puerperal eclampsia was beginning to be better understood. In none of his father's cases did convulsions occur when venesection had been practised upon the appearance of threatening symptoms, and even in those in which convulsions had already occurred a prompt withdrawal of blood averted the fatal issue. When the writer himself began practice, chloroform was just coming into use, and he was anxious to make use of it in puerperal eclampsia. In a case seen with his father a convulsion had occurred, and consent was given reluctantly to make trial of the anæsthetic. This was done, but the convulsions were not averted, the patient grew worse and worse, until finally phlebotomy was insisted on. Thirty ounces of blood were removed, the convulsions did not again recur, and the patient recovered. The author related a number of cases occurring in his own practice in later years in which chloroform, chloral, the bromides, and opium were used persistently, but the patients continued to grow worse; but when, finally, venesection was with many misgivings resorted to, improvement at once took place, and the lives of the women were saved. In every case cathartics were given early, and the uterus was emptied of its contents as speedily as possible, yet no favorable change occurred until the blood-letting had been practised. Irregularity of the pulse was insisted upon as an imperative indication for the abstraction of blood. The author had never seen a fatal case either in his father's practice or in his own when venesection was practised, and he asserted that if this measure was resorted to before consciousness had been abolished the patient would not die of eclampsia. The lancet was the sheet-anchor in convulsions of pregnant and parturient women. The author laid down the following rules, which should be followed in every case of pregnancy: 1, Always see the patient at least two months before the completion of her term; 2, test the urine frequently; 3, if there is much persistent headache, open a vein and bleed until the headache is relieved; 4, warn the patient against indulging in an improper diet; 5, keep the bowels open; and 6, if the patient be seen for the first time at the beginning of labor, and convulsions are threatening, resort at once to venesection.

Dr. Moore, of Monroe County, had had a somewhat less happy experience than the author of the paper, and he had seen cases that did not yield to blood-letting. He believed that the only real cure was to be obtained by eliminating from the blood the poison that occasioned the convulsions, and the way to do this was to produce abundant catharsis. He preferred for this purpose the saline cathartics. But the action of cathartics is not instantaneous, and in order to gain time it is necessary to avert the threatened convulsion by some ready means. Blood-letting will do this; but ether, not chloroform, will also do this and do it better. He always gave ether, in puerperal convulsions even, and especially, when there was unconsciousness with stertorous breathing. He gave plenty of it, and kept the patient profoundly under its influence, for hours if necessary, until the cathartic had produced a copious evacuation of the bowels.

Dr. Pomeroy, of Monroe County, related a case in which convulsions occurred again and again, in spite of the use of chloroform, and did not cease until the bowels had acted thoroughly. He thought the lancet was useful in certain cases, but the thing of prime necessity was free catharsis.

Dr. Hovey maintained that the main thing to do in a case of puerperal eclampsia was to empty the uterus.

Dr. Thayer, of Kings County, agreed with Dr. Moore as to the value of ether, but preferred veratrum viride. The treatment of convulsions by means of this agent was very extensively practised in Brooklyn, but the doses, to be effectual, must be large—a drachm of the tincture. This drug reduces the rapidity of the circulation speedily and permanently, and when the pulse is lowered the convulsions will cease. Drachm doses may be repeated every hour, according to the indications afforded by the pulse.

Dr. Cronin, of Erie County, mentioned the former division of eclampsia into apoplectic, epileptic, and hysterical. It is in the epileptic form that bleeding is useful.

In closing the discussion, Dr. Colvin insisted again upon the irregularity of the pulse as an indication for phlebotomy. When this irregularity occurred, he maintained, death was near, and nothing could ward it off but blood-letting.

A paper by Dr. B. L. Hovey, of Monroe County, on "The Practice of Medicine Forty Years Ago, with Comparative Position at Present," was read by title.

Dr. C. C. F. Gay, of Erie County, then read a paper on

fracture of the base of the acetabulum.

It has been said that this fracture rarely occurs, and that when it does, it is due to a violent injury over the trochanter. But the object of the present paper was to show that it is of not so infrequent occurrence, and that it may be produced by comparatively slight causes. There may be a simple straight fracture, or the base of the acetabulum may be shattered and broken up along the lines of union of the original bones. The fracture may occur alone, or may be complicated with a fracture of the

innominate bone, and the head of the femur may or may not be displaced. It may occur at any age. The author related a case seen by him in which the patient had fallen sixteen feet, striking on the right hip. Upon examination, under ether, there was found a slight eversion of the foot, with no shortening, and it was stated that crepitus was present. Extension of a few pounds' weight was applied and afforded relief to the severe pain complained of. The following day another examination was made, and the same signs observed, except that no crepitus could be obtained. Some days later the limb was again examined. Soon after, symptoms of septicæmia presented themselves, and the patient died. At the autopsy the joint was found filled with pus, which had found exit into the abdominal cavity. The base of the acetabulum was fractured in three directions, following the original lines of union of the bones. The only prominent symptom in fracture of the base of the acetabulum is severe and persistent pain, increased by movement or by pressure against the trochanter; there is no shortening, no deformity, and no crepitus. This accident, when there is no displacement of the head of the femur, is not fatal, nor even dangerous, provided the patient be let alone. It is the frequent manipulation and examination that causes the change. The management of a case of fracture of the base of the acetabulum consists simply in giving perfect rest to the joint. When fracture is suspected, the patient should be kept in bed with the limb resting in an easy position, and extension may be made or not according to the amount of relief which it affords to the patient.

There was no discussion of this paper, but several of the members thanked the author for his communication, as having indicated to them the correct diagnosis in several perplexing cases which they had under treatment at the present time.

Dr. J. G. Orton, of Broome County, then related

A CASE OF TUBAL PREGNANCY, AT FULL TERM, OF FOURTEEN YEARS' STANDING.

The patient had passed through what seemed to be a normal pregnancy, at the expiration of which some abortive attempts at delivery were made. These subsided in a little while, and as time went on and no further symptoms were developed the conclusion was arrived at that a mistake in diagnosis had been made. The patient's health declined, and for eighteen months she was very ill; but at the end of this time she began to improve, menstruation returned, and she was soon perfectly restored. The tumor remained, however, and fourteen years later she began to have a considerable fluid discharge. On examination an opening was found in the rectal wall, through which a hard and movable body was felt. A bullet forceps was introduced, and brought away the femur of a full-grown fœtus. In numerous subsequent sittings, held about every second day, about one hundred bones were removed. The patient was then attacked with a diarrhœa prevalent at the time, and died. At the autopsy the right Fallopian tube was found greatly enlarged, and on opening the sac the remaining bones of a full-term fœtus were found.

Dr. Nathan Bozeman, of New York County, then presented a communication on

TWO CASES OF EXTRA UTERINE PREGNANCY, CONSIDERED IN RELATION TO DIAGNOSIS AND TREATMENT.

The first case was one of rupture of the tube, with profuse hemorrhage into the abdominal cavity. Laparotomy was performed, but the patient died thirty-three hours after the operation. The second case was one in which abdominal pregnancy had occurred, but gave rise to no more dangerous symptoms than a very severe pain in the abdomen, which was controlled by morphine. The patient continued for three years in excellent health, except that she suffered from violent facial neuralgia. At this time menstruation ceased, and the woman was found on examination to be again pregnant. She was taken with pains, and was delivered of a seven-and-a-half months' still-born fœtus. At the time of delivery a hard body was felt presenting in Douglas' *cul-de sac*. An incision was made, and the bones of a dead fœtus, almost entirely deprived of the soft parts, were removed. The patient made an excellent recovery, and is now perfectly well.

The credit of being the first to insist upon early laparotomy in the case of rupture of a tubal pregnancy belongs, the speaker said, to the late Dr. Stephen Rogers, of New York. Since then, the successful results obtained by Mr. Lawson Tait have placed this operation in the foremost rank of availability. The treatment of tubal pregnancy in the early months consists in the destruction of the fœtus by electricity. In this way we are able to avoid the graver operation of laparotomy which becomes imperative upon rupture of the tube.

Dr. Arnold, of Albany County, stated that there was a specimen in the Albany museum of a tubal pregnancy in which the fœtus had been carried for fifty-two years.

Dr. Newman, of New York County, related a case of delivery of the bones of a fœtus through the rectum very similar to that reported by Dr. Orton. The speaker approved of electricity in the early stages.

Dr. Bozeman, in concluding, related a case of tubal pregnancy, with threatened rupture, now under treatment by electricity. An interrupted galvanic current from fourteen cells is used, the negative electrode being passed up by the side of the uterus with the positive pole on the abdomen. One or two applications are supposed to be sufficient to cause the death of the foetus, but four are generally made to ensure success.

Dr. C. S. Bull, of New York County then read a paper on

HYDROCHLORATE OF COCAINE AS A LOCAL ANÆSTHETIC IN OPHTHALMIC SURGERY.

The first knowledge which we had received of this new application of the alkaloid of coca, was obtained, the speaker said, through a letter of Dr. Noyes published in The Medical Record. The author gave the results of a number of experiments made with this substance. In one hundred and fifty cases he had obtained complete anæsthesia of the conjunctiva in all but three. The mydriatic effects of cocaine are less marked than those of atropine. Dilatation of the pupil occurs more slowly and recedes more rapidly than when the latter agent is used. As regards accommodation, the range is shortened and the near point recedes. Recession of the near point begins within twenty minutes after instillation of the four per cent. solution, increases during fifteen or twenty minutes, and then diminishes. Complete paralysis of accommodation was never observed. The effects of the alkaloid as an anæsthetic are chiefly superficial, though the deeper structures are slowly affected. Anæsthesia of these parts, however, can be obtained by injection of the solution into the anterior chamber. The author related a number of cases of operation upon the eye in which no pain was experienced. He believed that every operation in ophthalmology, with the possible exception of enucleation of the eyeball, might now be painlessly performed, and he predicted that ophthalmologists would in the near future be released from the thraldom of ether. By means of this anæsthetic also paracentesis of the drum membrane could be performed without pain. It was also of value in acute nasal catarrh. By an application, by means of a probe armed with cotton, to the mucous membrane of the anterior and posterior nares an acute coryza could be cured. After such an application in his own case the respiration became perfectly free, and remained so for five hours: a second application then completed the cure.

Dr. Mitchell, of Rensselaer County, desired to add his testimony to all that had been said of the value of cocaine hydrochlorate. He had used bromide of ethyl very largely in ophthalmic practice, and considered it of

great value. Prompt effects were obtained in one or two minutes and the recovery is almost as speedy, and it was, he thought, absolutely safe in short operations. But this new anæsthetic agent seemed destined to supersede all others. He thought it especially useful for diagnostic purposes in the case of young children, as even the most timid would allow the eye to be handled without shrinking when they found that manipulation caused no sensation.

Dr. Squibb, of Kings County, said that he had received over three hundred letters asking for cocaine immediately after the publication of Dr. Noyes' letter in The Medical Record. He had tried to extract the alkaloid from coca leaves; but had as yet succeeded in obtaining only about enough to show that it really was the hydrochlorate of cocaine. The price of the drug was formerly $2.50 per gramme (15 grains), but was now about fifty cents a grain, and was likely to be more expensive before it became cheaper.

Dr. Frederick W. Putnam, of Broome County, read a paper entitled

A REPORT OF A CASE OF DISLOCATION OF THE FIRST PHALANX OF THE THUMB FORWARD.

Few such cases have ever been reported. In the case cited, a boy ten years of age fell from a swing, dislocating the first phalanx of his thumb forward. There was severe pain but very little swelling. The luxation was readily reduced, and the case did well. (The original report of this case appeared in vol. xxv. of The Medical Record.)

Dr. Jonathan Kneeland, of Onondaga County, had his paper on "Common-Sense *vs.* Hypothetical Medication in Treating Chronic Diseases," read by title.

Dr. John P. Gray, of Oneida County, next read his paper entitled

INSANITY—PREVENTIVE MEASURES.

The idea of his paper was to give a few hints on the prevention of insanity. Modern science has suggested health boards which are authorized to proclaim the laws of hygiene and enforce them. In contagious diseases persons can even be removed from their homes and isolated. Compulsory vaccination is the extremest step that has been taken in this direction. In ordinary diseases, however, the individual is left to his own discretion. Insanity is a disease of frequent occurrence, and to a great extent within legal control. This is a necessity to protect the public as well as the patient. Over twelve thousand persons are confined in asylums in New York State. Medical men have a great responsibility in this matter, as only they can commit to asylums.

CAN ANYTHING BE DONE BY GENERAL PRACTITIONERS TO PREVENT THE BEGINNING OF INSANITY?

The habits of body and mind, emotions, disposition, etc., must all be carefully considered. Insanity means sickness of body producing sickness of mind. The average medical man thinks of insanity as the last thing liable to happen. Physicians in large practice often say they see very little of insanity. The reason of this is probably that persons having a family physician are less liable to suffer from severe depreciation in health, which leads to insanity. An early recognition of a *flagging of the nervous system* is of the first importance. *Rest and food* are then of greater importance than travel. Sedatives and narcotics disorder nutrition, and do more harm than good; if they are much used, the patient is apt to go from hypochondriasis to melancholia, often ending in suicide. Chalybeates, milk, and malt, and nourishing food, do better than sedatives.

CHILDREN AND YOUTH ARE SENT TO SCHOOL TOO SOON AFTER RECOVERING FROM DISEASES LIKE SCARLATINA AND MEASLES.

They are thus apt to contract such affections as hysteria and chorea. An early recognition of *changes in the character* is of the greatest importance. An unnatural timidity or anxiety are among the earliest changes. Patients must be taught to resist such tendency, and their nourishment be increased in every way. They must be treated as sick persons when in this uncertain mental state, due to disordered health. At the same time the patient's apprehensions should not be aroused—loss of sleep and too little food generally precede such a state. The early stages of alteration in health and character can be often best recognized and overcome by the family physician.

Evening Session.

Dr. Gross, of Philadelphia, being present, was invited to sit as a delegate.

Dr. Stephen Smith, of New York, submitted the conclusions of a paper on

EXCISION OF THE KNEE IN PREFERENCE TO AMPUTATION IN CERTAIN DEFORMITIES OF THE LEG.

The class of cases referred to were described as flexions of the leg due to chronic disease of the joint, or from other causes, which prevented the limb from being straightened so as to bring any part of the foot to the ground. In these cases the joint is not always seriously compromised, but the long-continued flexion has led to such a contracture of parts that it is impossible to put the limb in a useful position without excision. The operation gives much *better results as regards future usefulness* of the limb than amputation.

Dr. Gross, of Philadelphia, described an operation devised by his father, by which the partial anchylosis of the knee may be overcome.

Dr. E. M. Moore, of Rochester approved of excision in the class of cases referred to in the paper.

Dr. George Harrison, of New York, read a paper on

THE CURETTE, ITS PLACE AND ITS POWER IN UTERINE THERAPEUTICS.

Two problems presented themselves as to its use. First, to determine what conditions demand its use, and second, the best method of using it. It was very useful in removing morbid, soft structures from the inner surface of the uterus.

A paper on

THE RELATIONS BETWEEN TUBERCULOSIS, JOINT DISEASE, AND GENERAL TUBERCULOSIS,

was read by Dr. Dennis, of New York.

Recent pathological researches have shown that joint disease are primarily generally due to tuberculosis and very rarely to traumatism. Clinical facts show that a close relation exists between acute miliary tuberculosis and local tuberculosis. Tuberculosis starts from a focus, and this focus is a diseased lymphatic gland. The central cheesy foci situated in diseased glands afford means for the development of the disease. He then gave the history of a case in which a cheesy mass was taken from a diseased wrist-joint, and the microscope showed it to contain bacilli tuberculosis. The patient some weeks after died of acute miliary tuberculosis. This is the most important link showing the relation between the two affections. Acute miliary tuberculosis is an infectious disease, and may be developed by inoculation or by inhaling tuberculous material. The removal of the cheesy glands which contain the foci of the disease is the easiest means of eradicating it. Marked improvement in cases will generally follow the removal of the cheesy masses. Examine the character of the discharges in every case to determine the presence of bacilli of tuberculosis. The greatest danger from tubercular joints is acute miliary tuberculosis.

Dr. Gross said primary articular tuberculosis was identical with tuberculosis of testicle and other parts of the body, and this connection was shown in the cause of death. He advocated the opening of the joint and removal of diseased tissue and then sprinkling the parts with iodoform.

Dr. Dennis then presented some specimens of the disease.

Dr. W. T. Lusk read a paper on

THE MANAGEMENT OF BREECH CASES IN WHICH BOTH LOWER EXTREMITIES ARE BENT UP PARALLEL TO THE ANTERIOR SURFACE OF THE CHILD.

In these cases Nature most often fails to finish her work. Emergencies rarely arise before the breech has descended into the brim. Many object to the use of instruments in these cases, but experience recommends their use in cases where manual manipulation is of no avail. The chief objection to the forceps is that it is designed to take only the head. If applied to the breech it may slip off or break the pelvic bones, lacerate the soft parts, or kill the child, sometimes injuring the soft parts of the mother. Since the introduction of the traction-forceps a new impulse has been given to the use of forceps. The use of forceps is inadmissible unless the breech does not engage the brim of the pelvis. The extraction of the child must not be made an exhibition of strength. But little force is needed. Traction force is most successfully used during the pains. If the forceps fails from any cause, or is inadmissible, the employment of the fillet is admissible. Dorso-posterior position calls for especial caution when traction is made from the groin. The main drawback to the use of the fillet is the difficulty of passing it around the thigh in most of those cases in which it is most useful. The objection to the blunt hook is due not to inherent defects in the instrument, but to want of care in its use.

Dr. Thomas H. Manley read a paper on

WOMEN AS MIDWIVES,

in which he advocated their employment among the working classes, and the opening of *schools for their education.*

Thursday, November 20th—Third Day—Morning Session.

The Association was called to order at 9.30 A.M.

A preamble and resolutions on the death of Dr. John G. Adams were offered by Dr. Purple and adopted by the Association.

DR. GOULEY THEN ASKED EVERY MEMBER OF THE ASSOCIATION TO FURNISH HIM WITH THEIR PICTURE.

Cards containing an order on a photographer would be furnished them, and he only wished to have one picture left for himself. He already had their autographs and he wished to remember them all personally.

Dr. Flint, Sr., then offered resolutions thanking Messrs. Carnegie and Vanderbilt for their recent munificent gifts to the cause of medical science. Unanimously carried.

The committee on nominations reported the following

OFFICERS FOR THE ENSUING YEAR:

President—Dr. John P. Gray, of Oneida County.

Vice-Presidents—Second District, Dr. W. H. Robb, of Montgomery County; Third District, Dr. J. G. Orton, of Broome County; Fourth District, Dr. Joseph O. Greene, of Erie County; Fifth District, Dr. J. C. Hutchinson, of Kings County.

New Members of Council—First District, Dr. William Gillis, of Franklin County; Second District, Dr. R. C. McEwen, of Saratoga County; Third District, Dr. Frederick Hyde, of Cortland County; Fourth District, Dr. Darwin Colvin, of Wayne County; Fifth District, Dr. J. W. S. Gouley, of New York County.

Report unanimously adopted by the Association.

Dr. Austin Flint then delivered an

ADDRESS ON MEDICINAL AND NON-MEDICINAL THERAPEUTICS.

The scope of his remarks was to define the term therapeutics, which may denote drugs only, or, in a broader sense, any means or appliances for the cure of disease. It is popularly considered to be the chief business of physicians to use drugs. The prevailing sentiment at present is that a doctor without drugs is like the play of "Hamlet" without *Hamlet.* A case was cited in which a patient who had recovered from pneumonia without the use of drugs complained of the inattention of the physician. Professional visits without a prescription are often deemed useless by the patient. In the popular sense, *medicine* means drugging. A knowledge of anatomy and physiology are not appreciated by the public. A physician should not be considered only as a dispenser of drugs. It often takes better judgment to *withhold drugs* than to give them. Nothing is easier than to give drugs. The time will come when the doctor will be considered a *medical counsellor,* and this reformation must take place in the public mind. Nature is always the efficient curative agent, and most diseases tend by themselves to recovery. It is to this fact that irregular systems of medicine owe their popularity, especially in regard to infinitesimal doses. There is considerable diversity of opinion among physicians as to the effects of drugs; some are too confident of their powers, and others too sceptical.

There are *pharmacomaniacal* doctors as well as patients. Each new remedy is eagerly accepted and the old one discarded. The *sceptical* doctor shows the reverse picture, and the truth lies somewhere between these extremes. We must be satisfied that potential drugs are clearly indicated before using them. Clinical experience is the only rational ground upon which drugs are to be used, and hence the importance of close observation. The results of experiments on lower animals must be accepted with caution. It was empiric knowledge that first led to the use of such drugs as cinchona and mercury, although now we think they may act as parasiticides. Theoretical knowledge has rarely been of much clinical use. The parasitic idea of the etiology of disease offers a great future for therapeutics in the line of discovery of parasiticides. Non-medicinal therapeutics are not much appreciated by the pharmacomaniac. Harm may be done by the use of non-medicinal agencies as well as by an injurious use of drugs. Diet is an essential factor in therapeutics, and we must keep in view that there is never danger from over-nutrition. The lethal agency in exhausting diseases is always denutrition and starvation. If patients can digest and assimilate food they cannot be overfed. The best principles of therapeutics are in accord with *common sense.* There must be a regard for nature's wants, and appetite and taste generally show what is needed. In cases like the essential fevers, where the appetite is gone, reliance must be placed on milk and eggs. With regard to beef-tea, extracts, etc., the nutriment is almost *nil,* although they act as stimulants to the digestive fluids. Beef-tea has been compared to urine. Leube's solution contains the equivalent of solid flesh, and Rosenthal has made it more palatable. Most nervous diseases are due to deficient nutrition. Is alcohol a food? To a certain extent it is, inasmuch as it is not expelled from the body as alcohol. It should not be withheld in disease, even if it is not always desirable in health; the tendency of late years has been to use alcohol rather more restrictedly.

In certain cases of phthisis, alcohol retards the disease and it sustains life in typhoid fever. It prevents tissue waste and has antiseptic properties. The term to *catch cold* is indefinite and does harm among the laity. Sick rooms are poorly ventilated, and sponging deemed hazardous; in pneumonia, especially, is there a popular prejudice against cold. Few diseases are due directly to cold, and a fever patient never catches cold. The mental influence of the doctor on the patient is important. Some never succeed because they cannot inspire *confidence, faith, and hope.* One class of physicians are too sanguine, and thus err in prognosis; another class are too pessimistic. A gloomy prognosis may contribute to its fulfilment. *Faith cures* show the influence of the mind on the body, and physicians may learn something from them. The introduction of the term *neurasthenia*

has done harm. Too much introspection must be avoided, and the sanitary effects of work not overlooked.

Resolutions of sympathy with Dr. Sayre in his illness were carried.

RESOLUTIONS OF THANKS TO DR. J. W. S. GOULEY FOR THE ENERGY DISPLAYED BY HIM IN CONNECTION WITH THE ASSOCIATION

were also carried.

Dr. John P. Gray, the President-elect, then took the Chair. He made a brief speech in which he stated that the Association was not an offshoot, and represented neither new code, old code, nor no code, but was intended to keep up the fellowship and feeling that had formerly existed in the profession.

Afternoon Session.

The first paper read was by Dr. Gaspar Griswold, of New York County, on

FALSE ALBUMINURIA.

There were two classes of cases considered by the speaker: 1. Those in which the urine does not contain albumen, but in which a precipitate resembling albumen is thrown down by the ordinary tests. 2. Cases in which the urine does contain albumen, but this albumen is not excreted by the kidneys, and consequently is not a sign of nephritis. The author described the methods used by himself in order to discriminate between different precipitates, and concluded by insisting upon the necessity of correct methods in testing the urine for albumen.

Dr. Samuel W. Smith, of New York County, then presented a communication entitled

THE EARLY USE OF THE KNIFE IN NÆVUS OF THE CAVERNOUS ANGIOMA VARIETY AS CONTRASTED WITH OTHER MODES OF OPERATION FOR REMOVAL.

The author urged an early operation by the knife, because of the rapid growth of the tumors, and reported two cases in support of his preference.

The following papers were

READ BY TITLE

and referred to the Committee on Publication.

"Stretching of the Nasal and Infra orbital Nerves in Ciliary Neuralgia," by Dr. C. G. Ross, of Chemung County; a case of "Ovarian Cyst with Operation," by Dr. T. M. Lloyd; "Organic Disease of the Brain not a Constant Factor in Insanity," by Dr. Simeon T. Clark, of Niagara County; "Supporting the Perineum in the Act of Parturition," by Dr. Jacob Hardtman, of New York County; "Report of a Case of Gunshot Wound of the Stomach, Recovery," by Dr. John H. Hinton, of New York County.

Dr. E. G. Janeway, of New York County, next read a paper on

ABSCESS OF THE LIVER.

The doctor has seen a comparatively large number of cases of abscess of the liver during the past year, and thinks that the disease is not so infrequent in this climate as is usually supposed. The abscess may be single or multiple. The idiopathic form is to be distinguished from that ocurring when there is infection through the portal circulation. Sometimes several small infective abscesses may coalesce and form a single abscess, resembling the idiopathic form. During the present year the doctor has met seven cases; of these three died and four recovered. Of those that recovered, in three cases the abscess was opened by operation and one opened spontaneously.

Dr. J. Lewis Smith, of New York County, then read a paper on

DIPHTHERITIC CROUP.

He stated that croup was usually, but not always, a local manifestation of diphtheria. Any severe inflammation of the larynx might result in the formation of a pseudo-membrane. He related a case of membranous croup in a child, twenty-five months of age, due to "catching cold." Croup did not occur always from propagation of the specific inflammation from the pharynx and fauces, but might be the first manifestation of the disease. It might also occur in the course of diphtheria, notwithstanding the most thorough disinfection of the faucial exudation. Whenever in a case of diphtheria the patient became hoarse or presented any other signs of implication of the larynx, treatment by inhalations of lime-water was imperative. When any marked dyspnœa was present, not more than one in eight patients could be saved without tracheotomy. The room should be filled with steam from a croup-kettle or atomizer; to the lime-water in the atomizer liquor potassæ, in the proportion of one and a half per cent., being added.

Dr. Rochester, of Erie County, related a case in which he employed a mixture of iodoform and bismuth (one part to two) in insufflation; no other treatment was given except stimulation.

Dr. Reese, of Kings County, since he had used kerosene in inhalation, had never had a fatal case of croup.

Dr. Moore, of Monroe County, had found frequent insufflations of bicarbonate of soda most effectual for dissolving membrane.

Dr. Austin Flint, Jr., related

SOME TYPICAL CASES OF DIABETES MELLITUS NOT BEFORE REPORTED.

They illustrated the value of arsenite of bromine (three to five drops of Clemens' solution three times a day) in conjunction with a rigid anti-diabetic regimen. In conclusion he quoted a statement of Cantani that diabetes was readily curable provided only that treatment be begun in an early stage.

Dr. Clark, of Vermont, said that in his own case he suffered greatly from dyspepsia when starchy foods were excluded. He found sugar in his urine when the specific gravity was reduced to 1.003.

Dr. Fifiene, of Boston, related the case of his son, who suffered from diabetes after the bite of a bull-dog. He did not believe that dieting would ever cure diabetes in the young, and if it did in the old it must be because of some constitutional difference.

Dr. T. W. Ross, of Chemung County, reported a case of

RUPTURE OF THE UTERUS,

occurring in a woman with narrow pelvis, who had had nine previous pregnancies, none of them, however, going to term.

Dr. Bontecou, of Rensselaer County, then exhibited a patient illustrating

A CASE OF CONSERVATIVE SURGERY AND ITS RESULTS.

The patient was shot in the late war and suffered a very extensive injury of the shoulder-joint. Exsection was performed some month later, as much of the periosteum having been saved as possible. There had been a considerable reproduction of the shaft of the humerus.

A paper was then read by Dr. J. W. S. Gouley, of New York County, entitled "Report of a Case of Ligature of the Primitive Iliac Artery for Diffuse Aneurism of the External Iliac Artery."

The session was then adjourned.

At the close of the session on the third day two hundred and thirty-eight members had registered.

The Fellows residing in New York County entertained the Association at supper in the evening at the Murray Hill Hotel.

The programme for Friday included surgical operations at Bellevue Hospital at 10 A. M., an exhibition of various bacilli at 11 A. M., and an excursion to the hospitals on Blackwell's, Ward's, and Randall's Islands at noon.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

CHANGES IN THE ARMY MEDICAL DEPARTMENT—EXAMINATION FOR PROMOTION—ANOTHER MEDICAL JOURNAL—VICTORIA AND LONDON UNIVERSITIES—MEDICAL DEGREES—CRISIS IN THE LONDON MEDICAL SCHOOLS—PROPOSED UNION OF THE TWO LONDON COLLEGES—REFORM OF THE COLLEGE OF SURGEONS—SIR LYON PLAYFAIR AND MEDICAL REFORM.

LONDON, November 1, 1884.

CONSIDERABLE changes are being effected in the Army Medical Department, and some of them are giving rise to disaffection, if not hostility. First of all the Department is to be furnished with a brand new name—"The Medical Staff." This is not sufficiently dignified for some, who think it entitled at least to the prefix "Royal," which has indeed been recommended by two important committees of inquiry; but for some reason, comprehensible perhaps to the official mind, has been withheld. It is said, however, that it may even yet be conferred. I do not know that it will do our army surgeons much good, but if they desire an empty distinction of the kind, their arduous services entitle them to the honor.

Army surgeons have a further grievance: honors and distinctions are conferred freely enough on combatant officers, even when they have run no particular risks, but are only grudgingly awarded in the fewest possible cases to surgeons whose lives have been freely exposed in the performance of their duty. It is a curious thing to observe that the name of the head of the Medical Department appears in the army list without any military decoration. There has always been a jealousy between combatant and non-combatant officers. The former have affected to look down upon their surgeons, except of course at the time their services were in actual demand.

Another important change is also to be inaugurated. An examination for promotion to the rank of Brigade-Surgeon is to be instituted; and the feeling with which this regulation is received by those who will have to be examined is naturally the reverse of pleasant. The Duke of Cambridge stated before a parliamentary committee that to "examine a man up to fifty years of age is hardly fair, and that if the heads of the department do their duty they ought to judge of the fitness for promotion of medical officers without examination." Speaking as a civilian I should think His Royal Highness must be right. There are some people who think examination can test everything. It would open their eyes if they were examined themselves. One defender of the new proposal says that a good administrative officer requires tact as well as temper. Fancy examining a man to ascertain whether he possesses such qualifications! Another defender asserts that the examination is optional. Of course it is, but passing it will be necessary for promotion; the option, therefore, is of the kind known as "Hobson's choice." I observed some time ago that this question of examination for promotion had been fully discussed in THE RECORD in reference to the regulations of the United States Army. American Army surgeons can therefore sympathize with their British brethren in the infliction to which they are about to be subjected. At first it was actually proposed to examine surgeons-major in operative surgery; but I hear that this rule is to be modified, and further that fellows of one of the Royal Colleges of Surgeons are to be exempted from the new examination.

A new periodical, *The Medical Chronicle*, appeared in October. It may be regarded as the organ of the Manchester Medical School, as it is issued under the authority of an influential committee in that city. But it proposes to give a full abstract of current medical literature. As Manchester is the seat of the new Victoria University and of numerous medical charities, there may be room for such an organ.

Speaking of the "Victoria" reminds me that that university has just missed a great chance of at once becoming one of the most important medical institutions by confining its degrees to the students of its own colleges. Had it thrown open its portals to all qualified practitioners who could pass its examinations, hundreds would have applied for its degree, to whom the condition of residence renders such a distinction inaccessible. But the Victoria does not accept the examinations of other universities, not even of the London, on whose evil model it has so largely framed its regulations.

To other nations it must be almost incomprehensible that the great bulk of English practitioners do not hold a university degree. It is not because they do not desire it, but because the English universities have so framed their regulations as to drive men to the colleges which confer a membership or fellowship, but have no power to grant degrees. That the magic M.D. or M.B. is coveted is proved by the fact that hundreds go abroad to get it, and thousands go to Scotland. Only twenty per cent. of practitioners in England have any connection with the English universities, while nearly sixty-two per cent. hold Scotch degrees. In Scotland itself, ninety-eight per cent. of the practitioners are graduates. You will say that we have a university in London, but that body has devised such a stupid set of regulations that a very small number of students attempt to comply with them, and of those who begin the medical career mapped out for them and pass the earlier medical examinations only ten per cent. obtain the full degree. Was there ever such a specimen of "how not to do it?"

Just now the medical teachers of London are very much concerned about the facts I have named above, and no wonder their best men are leaving them, going off to inferior schools, because the metropolis with its unrivalled facilities for education is unable to crown the edifice with the recognized distinction. The list of entries at the medical schools for the winter session s now completed, and a genuine "eye-opener" it proves to be. The paltry University of Durham with its affiliated school at Newcastle has a larger entry than several of the London schools. Why? Because residence at Newcastle enables the student to take a degree, but residence at London does not. No one can suppose that medicine can be better taught at Newcastle Infirmary than at our great London hospitals; and yet these Newcastle students will soon come out as full-fledged M.B.'s or M.D.'s, with a legal right to call themselves Doctor, while students of Guy's, St. Bartholomew's, St. Thomas', and the London Hospitals, must be contented to style themselves plain Mr., or to append to their names half a dozen or a dozen letters, which are for the most part incomprehensible to the public. I have already informed you that there was a talk of making our two Royal colleges into a university, and this notion has gained ground, until to-day it has obtained the support of *The Lancet*, and many teachers would rejoice to see it accomplished. It ought to be easier with the materials thus to hand to inaugurate a medical university in close connection with the metropolitan schools, than to establish an absolutely new university in all the faculties. Our two colleges have agreed to unite and give a full diploma, which will qualify for practice in every department; but those who take that diploma, though they may be members of both colleges, will still have to call themselves Mr., will still be unable to sign themselves M.D., while their rivals and neighbors who hail from Newcastle or Aberdeen may write Dr. before their names or M.D. after. Unless something is done to remedy this injustice the ruin of the London schools is to be anticipated. In New York, I understand, the College of Physicians and Surgeons confers the degree of M.D. But on

your side of the water you can go ahead and rejoice in your strength; here we are overburdened with our age, and when we attempt to disturb the dust of centuries we are suffocated for our pains.

We have now in working order two Societies for the Promotion of Reform in the London College of Surgeons, and both bodies have put forth their grievances. The Association of *Fellows* have issued a series of recommendations, which are decidedly liberal, so far as they are themselves concerned, and inasmuch as they recognize the existence of *Members;* but they have no notion of making the latter an integral part of the corporation. As the recommendations will be shortly discussed and may be considerably modified, I need not more fully describe them. The Association of *Members* is rather more ambitious, and has actually petitioned the Prime Minister to assign two Members of Parliament to the medical men of the country. I do not suppose the petition will produce more than a faint smile in official circles. No profession, as such, enjoys parliamentary representation, and we may be pretty sure that such an innovation will not be made by a Government of which most of the members are opponents of "fancy franchises."

The mention of Parliament reminds me that the shadow of a coming election is already perceptible in several quarters, and in one is of special interest to our profession. The seat of Sir Lyon Playfair is again threatened; at the last election he was only returned by a small majority. He had deeply offended a large section of his constituents by his action on medical reform, and a medical man was put in opposition; he was, however, again returned for the Universities of Edinburgh and St. Andrews. Since then he has again played fast and loose with medical reform. He has no doubt pleased some of the Scotch corporations, but the majority of his numerous medical constituents are disgusted with his tergiversation, and those who are of the same political party think his time-serving spirit unfit for the representative of an academical constituency. This week, therefore, they have brought forward a candidate, who has promised to contest the seat on the first opportunity. Unfortunately he is a lawyer; and we have too many lawyers in Parliament. He is a thorough-going Conservative, and it is certain that the constituency is rather Liberal than otherwise. Further, though a large part of his address, about half, is taken up with medical politics, he completely misunderstands them, and would be quite as unendurable to medical men as their representative, as Sir Lyon Playfair himself. Only a medical man ought to be M.P. for the Universities of Edinburgh and St. Andrews. It was a mistake when Sir Lyon Playfair, as a Professor of Chemistry, was thought to be a suitable substitute for a *medical* candidate.

COCAINE HYDROCHLORATE IN MINOR SURGERY.

To the Editor of The Medical Record.

Sir: As the subject of cocaine hydrochlorate is somewhat prominent just now, I trust the following case will not be entirely without interest, your editorial of last week being partly responsible for the occurrence. At the semi-annual meeting of the Fairfield County Medical Society, held to-day at the Bridgeport Hospital, one of its members, Dr. Wright, of this city, kindly permitted the following experiment:

The doctor had a small fatty tumor upon his forehead. I passed the needle of an ordinary hypodermic syringe through the skin on one side, and tried to pass it across the tumor between it and the skin, but did not succeed, and so passed it through the tumor. Then while slowly withdrawing it, injected about six minims of a two per cent. solution of cocaine hydrochlorate, obtained from Foucar about three weeks ago. I then rubbed a few minims upon the skin over the tumor with my finger. In five minutes I thrust the needle into the skin over the tumor so as to draw blood. The doctor felt what he described a "sense of pressure," *i.e.*, he knew that I was doing something but felt no pain. In fifteen minutes there was apparently some return of sensibility. I then injected four minims more from the side opposite to that from which the first injection had been made. Dr. Weir, of New York City, who was present with us by invitation, then removed the tumor through a single straight incision about an inch and a half long.

The sensations of Dr. Wright during the operation are given in his own words. No one timed the different steps of the experiment accurately. I give my own estimates above and the doctor gives his below.

"The first injection by the hypodermic needle was quite painful to me, but as it was my first experience in its use upon myself I presume not more painful than to anybody else. In about two minutes I felt a benumbing sensation in and about the tumor, and suggested to Dr. Wilson that it was anæsthetic. He *pricked* it with the needle, but I only felt the *pressure*. In about eight minutes I felt as though sensation was returning to the tumor, but probably I was wrong, for in about ten minutes the second injection was given, of which I felt the initial prick, but was unable to locate from the feeling the place of injection, or the direction in which he ran the needle. In less than five minutes Dr. Weir began the operation, at which time the forehead and face felt anæsthetic for a radius of three or four inches. I felt the first cut through the skin, but it did not seem painful, or, at most, not more so than the scratch of a pin. Then I could feel the blood flowing down my cheek, and hear the grating of the knife, but felt *no pain* at all. I could barely distinguish the prick of the needle when the two stitches were taken. During and subsequent to the operation I felt elated and buoyant, and was less conscious than usual of fatigue during the long exercises of the afternoon, though on my feet the whole time. At no time have I felt sleepy, and though at the present time of writing, about seven hours after the operation, I have scarcely had time to sit down, I do not feel tired, and expect to visit several patients before bed-time. Such excitement and unusual exertion generally gives me a headache, of which now I have not a particle.

J. W. Wright, M.D."

There can be no question that in this single instance the subcutaneous injection of cocaine hydrochlorate transformed a very painful operation into a comparatively painless one. You will notice that Dr. Wright lays most stress upon the pain of the first injection of the drug.

F. M. Wilson, M.D.

317 State Street, Bridgeport, Conn.,
November 11, 1884.

OUR CINCINNATI LETTER.

(From our Special Correspondent.)

CINCINNATI MEDICAL SOCIETIES—COLLEGES—GUNSHOT SURGERY—MIDWIVES.

The medical societies, though baffled through the month of September by the excessive heat, are now down to a working basis, and promise some interesting meetings for the winter. Foremost and oldest of all is the Cincinnati Academy of Medicine. This society has Dr. W. H. Wenning, of St. Mary's Hospital, as President, and George A. Fackler, M.D., as Secretary. It has a large membership and, except on election nights, a fair attendance.

At a recent meeting, Dr. A. Ravogli reported a case of elephantiasis of the leg which he had seen during Dr. Connor's absence. The calf measured three feet four inches in circumference; the whole limb was invaded. Patient was eighteen years of age. The disease had its initial stage in early childhood, which is unusual. The boy weighed three hundred pounds, of which one hundred and eighty pounds were attributed to the leg.

He continued in good health till twenty four hours previous to death. The speaker was inclined to attribute death to an embolus. Said it might have been from pyæmia from excessive lymphangitis. Much interest was taken in this case.

At the meeting next in order, Dr. Hottendorf read an article on "The Abortive Treatment of Typhoid Fever." He reported as occurring in his practice during the last six years twenty-three cases of typhoid fever, fifteen in adults and eight in children. All he treated on the abortive plan, viz., calomel. He gave one-half-gramme doses every day, or more seldom if the case required, during the first week of the disease. He had had most gratifying results, viz., recovery in every case.

The Cincinnati Medical Society is younger, has fewer members, and a lighter attendance than the Academy of Medicine, yet it has some very live men and some very live meetings. The younger members of the profession seem to have a prominent part in its affairs and do the most of the work. While the Faculty of the Medical College of Ohio belong to the Academy, the Faculty of the Miami Medical College belong to the Cincinnati Medical Society. This is the differential diagnosis.

Dr. Dun, at a recent meeting, reported a case of severe shock from electricity—a female clerk of high nervous sensibility. The wires of the electric light became crossed with those of the cash-ball system while she was operating, and she received a terrible shock. She uttered a piercing cry and fell to the floor unconscious. By appropriate treatment she recovered. The doctor said we may expect to see more of this class of cases in the future.

At a more recent meeting Professor W. H. Taylor, one of the physicians on obstetric duty at the Cincinnati Hospital and Professor of Obstetrics at the Miami Medical College, reported the obstetrical department for the last four months he was on duty. He began with a description of the obstetrical wards, which showed very perfect isolation and care. In the after treatment he spoke of a $\frac{1}{2000}$ injection of the bichloride of mercury twice a day for ten days. Pulse and temperature are taken twice a day, and if any patient gives evidence of sepsis she is taken to other quarters at once. During the four months there were 79 deliveries, exclusive of abortions; 42 primiparæ, 37 multiparæ; youngest, 16; oldest, 44. Hyperæmius gravidorum was experienced by 47 in the earlier stages of pregnancy, 32 escaped altogether. Of abnormal presentations there occurred—left occipito-posterior, 1; foot, hand, and cord presented together in one instance. The forceps were used five times and podalic version twice. The reporter continued with an extended temperature chart and brief reports of six cases of difficult labor, two cases of puerperal fever, and one of scarlatina.

Dr. Davy objected to the use of injections in perfectly normal labor, because unnecessary; they disturb the parts, and trouble may ensue from the contact of parts with the hands of attendants and the atmosphere.

Dr. Stanton thought that care in the use of injections would overcome the objections to them. He was in favor of the use of injections, but thought much of the benefit was derived from the water, though the bichloride was not objectionable, and in some cases advantageous.

The Cincinnati Obstetrical Society pursues the even tenor of its way, and is not much known by the general public. It has nearly twenty members, two of whom are of the gentler sex. The members meet monthly at each other's offices or residences.

Our medical colleges are suffering from a decrease in receipts. The number of students has fallen off about thirty per cent. in each. Cause: the requirement of preliminary examination on entering. This has relieved the intestinal tract of the colleges of offending material as promptly as a good cathartic usually acts on the human intestine. Let the good work go on. Despite this decrease in attendance the names enrolled on the lists of private quizzes and private and extra courses has increased, showing a much better class of students than formerly.

The Cincinnati Hospital has been noticeably empty during the past summer. The Hospital of the Good Samaritan has been in much the same condition.

A remarkably interesting case of rodent ulcer occurred at the St. Mary's Hospital in July last. It was of twenty years' standing, in a man sixty-five years of age, and involved the whole right orbit cheek and nose, wanting but three lines of the inner angle of the left eye. Strange to say, after the immense destruction of tissue, the patient appeared in almost perfect health, and was always in good spirits. He left the hospital for his home, of course unimproved. A case of so-called "shaggers" fever, dengue, "break-bone" fever, was one of the curiosities at the same hospital during September last. The patient had been working on the Panama Canal, and brought the disease back with him. He had been sick a year.

The clinics at the Good Samaritan and Cincinnati Hospitals have been very profitable, so far, this term. Our surgeons have been treated with an experience in gunshot injuries recently which they have not seen the equal of since the war. The terrible Court House riots of last March and the election riots of the present month furnished them with about two hundred gunshot injuries. One difference the old surgeons noticed between those made by the militia during the late riot and those made by the soldiers of the late war is that the bullets of the latter day do not stop, but go clear on through. I believe that in no one instance in a wound made by a militiaman's bullet in the riot last March did the ball remain in the person wounded. The day of "probing for the ball" is, it seems, in reality gone by.

Thirty per cent. of the births in Cincinnati are attended by midwives, and yet almost five hundred physicians eke out an existence.

ABRACADABRA.

October 24, 1884.

RECOGNITION OF PRELIMINARY WORK.

To the Editor of The Medical Record.

SIR: In a late issue of THE RECORD, I observe an editorial under the title: "Recognition of Hard Preparatory Work." From time to time criticism of the kind you have made appears now in this medical journal, now in that; now in this form, and now in another. That some complaint is justified by the facts is admitted by all; that the existing evil should receive deserved correcting is the wish of every one. Why, then, does the evil stand, and complaint mock itself? Simply because of the incompetency of the means thus far adopted.

[The writer having discussed the various means heretofore tried and their failure, continues:]

The concluding paragraph of the article referred to above has this also: "Hard preliminary work deserves a little recognition other than the slow and uncertain recompense furnished by the public." Herein is suggested a method of correction which most assuredly will prove competent, because it is based upon the strongest and most constant passion of the human heart—pride. The method is this: Distinguish by some universal insignia or item of dress the graduate in medicine; and also, by modifications of this same, the degree of preparatory education. For instance, let the graduate in medicine be distinguished by some modest decoration, or some suitable device, whatever it may be, to be universally worn and acknowledged. Then, for the doctor of medicine who has been previously graduated in letters with the degree A.B., an additional ribbon or another color added to the M.D., decoration which will secure the deserved recognition; and so on, the degrees B.S., and A.M. and LL.D., etc., may thus receive recognition and

distinguish the "careless and half-educated" from those who have "trained themselves thoroughly." These decorations should be conferred by the same authority and at the same time with the diploma. They should mark no lower course in letters than that of the high school or academy, and the decoration for this course should be the basis or ground upon which the decoration for higher courses, B.S., A.B., A.M., etc., etc., are displayed. Crossing all these decorations for literary training, should be displayed those of professional significance, one for medicine, one for law, one for theology, etc. This scheme will be ridiculed, I know, and chiefly by those who would be made conspicuously deficient thereby. It may also be ridiculed by those of so severe taste as to be offended by anything that in any way distinguishes. It may also be opposed by some as altogether "too silly," etc., etc. However, to the first I would say, your opposition is its very best argument; to the second, it is not at all a question of individual likes and preferences; to the third, what one among you would decline the red ribbon of the Legion of Honor if it were offered?

J. D. KELLY, M.D.

UTICA, N. Y.

PROTRACTED PREGNANCY.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I wish to put on record a protracted pregnancy. The case referred to is Mrs. P——, aged thirty-two; Irish-American; medium-sized. This was her fourth child. The third was born November 24, 1882. She menstruated regularly from the time she began after the birth of her third child until September 22, 1883, on which date the menstrual flow began and continued in the usual manner until September 25th. That was the last time she menstruated until she was delivered of a healthy living child (male) weighing eleven and a half pounds on August 21, 1884, in the evening. The time of parturition was about three hours.

The duration of pregnancy was just three hundred and thirty days. The above dates I can vouch for, for the following reason: The woman was desirous of not having more children, and kept on a calendar the dates of her menstruation, and had not passed her period but a few days before she came to me to see if something could not be done.

The longest case I can find on record is from Leishman's "Midwifery," page 175, where the duration was three hundred and twenty-two days. Professor Atlee records several of one year's duration, I believe, but I never have seen the records myself.

Yours truly,

J. W. WRIGHT, M.D.

THE MORAL EFFECT OF MEDICAL EDUCATION ABROAD.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: With regard to the "demoralizing influence" of medical education abroad I must say that, whatever may be the case in the continental cities, the statements made can in no way be applied to the London schools. By no means the least of the advantages of a London education, especially to a young man, is the high moral tone that pervades the profession, and the refining influence that intimate association with men of as high character as the London teachers are, must necessarily impart. I think I can speak without bias on the subject, being a graduate of two prominent universities in this country, and having subsequently passed through the entire curriculum at a London school of medicine. And I venture the assertion that the moral atmosphere of the lecture rooms, dissecting halls, and hospitals in London compare most favorably with any in this country or elsewhere. Any one who has had more than a casual view of the working of a London hospital and of the deportment of its attachés cannot fail to have noticed that the welfare of the patients is the prime object with all concerned, and that in no place is woman held in greater respect or treated with greater delicacy and consideration.

I am, sir, very truly yours,

THOMAS GREAVES, M.D., M.R.C.S., ETC.,

Adjunct Professor of Medicine, Medical College of Virginia.

"CONGENITAL HÆMORRHOIDS."

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: I have a curious *lusus naturæ* here in Brooklyn. A baby, female, was born October 22d, of healthy American parents, aged twenty-nine and twenty-four years respectively, being the first child. The mother has always been the picture of health, excepting chronic constipation and its natural result, hæmorrhoids, which have been many years a torment to her, and were naturally extremely aggravated by pregnancy.

At birth the little girl, otherwise well formed, presented, at the verge of the anus, on the right side, a fold of skin projecting three to four millimetres from the normal level of epidermis and five millimetres long by three millimetres broad. This is covered with healthy, normal integument, of natural color and sensibility. It is, then, an *imitation* of a pile, just where the mother's most annoying tumor was located. The little tumor seems to be merely an excess of skin at that point, and is in color and texture so like healthy skin as to show that it cannot be the result of inflammation.

The mother was very anxious to know if her baby "had piles," as she had suffered so much herself, and said "she had been praying for months that her child might be spared an affliction which had caused its mother so much suffering." Is this a *post hoc* or a *propter hoc*?

Certainly the mother directed her thoughts continuously for many days at a time *toward this spot* on her baby.

Is a similar case reported? Yours,

A. B. DE S. SIZER, M.D.

BROOKLYN, N. Y., October 30, 1884.

THE AMERICAN MODE OF GIVING POTASSIUM IODIDE.

TO THE EDITOR OF THE MEDICAL RECORD.

IN your editorial of November 1, in the article headed "American Mode of Using Iodide of Potassium," you state, "The writer also shows that the method originated with the late Dr. Van Buren of this city, and became gradually adopted as the result of practical experience by a number of New York physicians. . . . It is essentially an American, and more essentially a New York idea." I beg to inclose a copy of a prescription I gave in a case of syphilis in July, 1859:

℞. Potassii iodidi ..... ʒ vj.
Ext. sarsæ fluid..... ʒij.
Mucilag. acaciæ..... ʒiv.
M. Two tablespoonfuls four times daily, to be followed by a tumbler of flax-seed tea.

This prescription bears the date (as copied from my note-book) of July 26, 1859.

It will thus be seen that the method of giving iodide of potassium in large doses is by no means a New York method, but was used in New Orleans twenty-five years ago.

As I had only been in this country about five years at that time, it might more correctly be termed an English method. I do not claim any especial credit for giving the remedy in these doses, but, if there be any it should certainly be given to the one who originated it.

J. L. CRAWCOUR, M.D., M.R.C.S., Eng.

194 CAMP STREET,
NEW ORLEANS, LA., November 4, 1884.

P.S.—I would state that the above prescription, with some trifling modifications, was persevered in until

August 11th, when it was given in gradually diminishing doses. The result was an absolute cure, the patient remaining under my observation for twenty years without any recurrence of the disease.

[Many physicians have doubtless given large doses of iodide of potassium. The merit of doing this systematically, of recognizing and teaching it as producing specific therapeutical effects, belongs, so far as we yet can learn, to New York physicians.]

New Instruments.

A CORRECTED DESCRIPTION OF THE CONTINUOUS INDUCTION COIL.

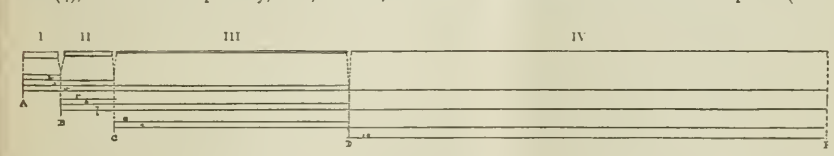
With an Illustration.

By A. D. ROCKWELL, M.D.,

NEW YORK.

The accompanying diagram is here presented and described as it should have been in my article on "The Induction Coil: Its Varieties, and the Differential Indications for their Use," which appeared in this journal, November 8, 1884.

"These coils are, for convenience of illustration, represented by the upper straight lines I, II, III, IV, termed, respectively, the primary, first, second, and third induction coils. The letters A, B, C, D, E represent the different posts of the continuous coil apparatus to which the conducting cords are attached, while the numerals 1, 2, 3, 4, etc., indicate the combinations by which are obtained ten different qualities of current. The short line marked 1, starting from A, represents the current from the short, thick, primary coil marked I. Second line (2), current from the primary and first (I, II) induction coils combined. Third line (3), current from the primary and first and second (I, II, III) induction coils. Fourth line (4), current from primary, first, second, and third



(I, II, III, IV) induction coils. Fifth line (5), current from the first (II) induction coil only. Sixth line (6), current from the first and second (II, III) induction coils. Seventh line (7), current from the first, second, and third (II, III, IV) induction coils. Eighth line (8), current from the second (III) induction coil. Ninth line (9), current from the second and third (III, IV) induction coils combined. Tenth line (10), current from the third (IV) induction coil only."

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from November 9 to November 15, 1884.

Byrne, C. C., Major and Surgeon. Granted four months leave of absence from November 16, 1884. S. O. 265, A. G. O., November 11, 1884.

Tremaine, W. S., Major and Surgeon. Granted leave of absence for one month on surgeon's certificate of disability. S. O. 233, Department of the East, November 12, 1884.

Wilson, William J., Captain and Assistant Surgeon. Granted leave of absence for four months, with permission to go beyond sea. S. O. 262, A. G. O., Nov. 7, 1884.

Shufeldt, R. W., Captain and Assistant-Surgeon. Assigned to duty as Post-Surgeon at Fort Wingate, N. M. S. O. 217, Department of Missouri, November 4, 1884.

Owen, Jr., William O., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Canby, W. T.' and ordered to Fort Spokane, W. T., for duty. S. O. 169, Department of Colorado, November 4, 1884.

Official List of Changes in the Medical Corps of the U. S. Navy, during the week ending November 15, 1884.

Beardsley, Grove S. Promoted to the grade of Medical Inspector. April 24, 1884. November 14, 1884.

Heffenger, A. C., Passed Assistant Surgeon. Duty at Portsmouth, N. H., continued till December 12, 1885. November 11, 1884.

Wieber, F. W. F., Assistant Surgeon. To the receiving ship Vermont, at New York. November 12, 1884.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending November 15, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
November 8, 1884.....	0	46	39	2	73	55	0	0
November 15, 1884.....	0	35	55	5	107	72	0	0
Deaths.								
November 8, 1884.....	0	22	7	2	8	37	0	0
November 15, 1884.....	0	10	8	4	15	40	0	0

Opium in Mitral Insufficiency, with an Ethical Episode.—The fact that opium (in small doses) has been frequently recommended of late as a heart tonic, makes the following case, as well as that of Dr. Edson, of especial interest. Dr. George T. McCoy, of Columbus, O., writes that he was called in to see a man, aged sixty-one, who was suffering from congestion of the lungs, with a troublesome cough and severe attacks of dyspnœa at night. Five grains of Dover's powder at night caused an alarming attack of dyspnœa. Dr. McCoy then found that the patient had mitral insufficiency and a dilated heart. Dyspnœa and insomnia continued, and a Dr. L—— was called in consultation. Our correspondent says: "I received a note shortly after Dr. L——'s visit, informing me that that gentleman (?) had assumed charge of the case, and my services were no longer needed. Dr. L—— went to work to 'give his patient rest,' 'he was simply dying for want of rest.' Administered tr. opii, gtt. xxv., every three hours until patient was able to go to sleep. Patient made two attempts to lie down, but the dyspnœa was so aggravated by change of posture that he was fain to be propped up in a chair again. After taking one full dose, and at the third hour half the quantity (in all thirty-five drops) he was enabled to sleep very quietly about four hours, when his breathing became labored, and death ensued without his return to consciousness again. The death was reported by Dr. L—— at the Health Office, as due to 'acute congestion of the lungs." My opinion then, as now, was paralysis of the heart due to opium-poisoning. I am led to make this report by perusing the article of Dr. Edson, in a recent number of The Record, the cases being so nearly

alike in everything except the position of the patient preceding death."

[It is unfortunate that an autopsy was not obtained in order to verify the diagnosis. Not unlikely there was some condition other than those discovered by Dr. McCoy. The best and latest authorities—Bramwell, Allbutt, Sansom, and others—in the continuous dyspnœa, orthopnœa, and insomnia of uncompensated mitral insufficiency.—Ed.]

Accommodation and Presbyopia.—M. Martialis, who is presbyopic, resorts to the following manœuvre when he is without his glasses and wishes to read: He introduces the pulp of the index finger rather deeply between the external border of the orbit and the globe of the eye on that part covered by the upper lid, making somewhat firm pressure. He states that the characters then become visible and he is able to read with ease. M. Martialis thinks that this would be useful in the diagnosis between a simple presbyopia and paralysis of the retina, crystalline opacity, etc. He sees in this a proof of the rôle played by the straight and oblique muscles in the function of accommodation.—*Lyon Médical*, October 5, 1884.

In Dr. Millard's letter, in our issue of November 8th, on the Prevalence of Consumption at Various Ages, page 528, seventh line from the top, 27,771,728 should read: 2,771,728.

The Responsibility of Physicians for Furnishing Proper Certificates of Insanity in cases before them is a matter of great importance, considering the rapidly increasing number of instances where the services of a skilled physician are called for. In a recent case in a New England State the action was brought for damages against a physician for falsely certifying, through malice or negligence, that a person was insane, and thereby accomplishing her commitment to an insane asylum. The pleadings in the suit raised the question as to the actual condition of the person at the time she was declared to be insane, and as the presumption was in favor of the certificate being correct, the burden of proof was upon the persons alleging that she was sane. The court said: "In such an action the falsehood, and not the insufficiency of the certificate, is the ground of action against the certifying physicians. Without statutory provisions to that effect there cannot be a civil action for damages against a physician based upon the insufficiency of the methods which he pursued in reaching and certifying a correct conclusion. In such an action it is open to the defendants to prove precisely what were the circumstances under which they acted, what inquiry, investigation, and examination they made, and what the information was on which they proceeded. If such testimony did not go to the extent of a justification in case their certificates should be found to be false on the question of insanity, it was proper evidence to be considered in awarding damages. If physicians who have certified to the insanity of a person, have not made the inquiry and examination which the statute requires, or if their evidence and certificate in any respect of form or substance is not sufficient to justify a commitment, the municipal officers should not commit, and if they do, it is their fault and not that of the physicians, provided they have stated facts and opinions truly, and have acted with due professional skill and care."

Professional Dignity and What Sometimes Comes of It.—Our London Correspondent sends us the following: "Many doctors are very fond of talking about the dignity of the profession, and how we should all of us do our best to uphold it. An eminent London physician once told me, in conversation, that he makes a point of never thanking his patients for his fee when he takes it, but simply pockets it as a matter of course as his due. I presume he would similarly disdain to ask for it should the patient depart without offering to pay. They sometimes do this. A friend of the writer's who was once treated thus by a lady richly attired, stopped her just as she was making her exit, and in the blandest of terms begged to be allowed to look at the prescription again for a moment. He looked at it for a few seconds, and then, tearing it across, threw it into the fire. 'Ladies in silks and satins,' he said, 'can generally afford to pay,' and calmly rang his bell for his servant to usher in the next patient. Doctors occasionally get the worst of it though, when they stand too much on their dignity with patients. One of the local practitioners in a country town I have frequently visited, was one day sent for to visit a child in the family of one of his patients. On arrival he found his little patient had been ailing for some days, and asked why he had not been called in before. 'Oh,' said the mother, 'we have been giving it a bottle of E——'s stuff,' mentioning a patent medicine prepared by a veterinary surgeon well known in the county, and a bottle of which she had obtained at the chemist's. 'What!' exclaimed the doctor, 'expect me to attend after a horse-doctor?' and he marched off in great indignation. The father of the child was a baker, and supplied the doctor's family with bread. Next day no bread was delivered at the doctor's house. The doctor's wife put on her bonnet and shawl and went out to call on the baker, respecting the omission. On entering the shop she saw the baker's better half, and politely intimated that she had called to say that no bread had been left as usual, and she would be glad to have some sent. 'Oh, no,' was the reply, 'your husband won't attend us as a doctor, so we shan't supply him with bread,' and they didn't. The doctor was forced to deal with another and inferior baker, as similarly the baker had on the previous day been forced to send for another doctor. By the time this appears in your pages medical students and professors alike will be preparing for the opening of the winter session, which is always heralded by the first of October. The Scotch schools do not begin till the first of November. It seems a pity in each case that the studies could not be so arranged as to give more summer holiday, say by beginning in the middle of September and continuing until the first week in July, with only fortnightly vacations at Christmas and Easter, instead of having April as an idle month, and sweltering in town till the last week in July. Some of the medical examinations are even held during August."

The Cost of Sickness.—I think, then, that we cannot escape from the reasons to believe that we lose in England and Wales every year, in consequence of sickness, 20,000,000 weeks' work; or say, as much work as 20,000,000 healthy people would do in a week. The number is not easily grasped by the mind. It is equal to about one-fortieth part of the work done in each year by the whole population between fifteen and sixty-five years old. Or, try to think of it in money. Rather more than half of it is lost by those whom the Registrar-General names the domestic, the agricultural, and the industrial classes. These are more than 7,500,000 in number, and they lose about 11,000,000 weeks; say for easy reckoning, at £1 a week; and here is a loss of £11,000,000 sterling from what should be the annual wealth of the country. For the other classes, who are estimated as losing the other 9,000,000 weeks' work, it would be hard and unfair to make a guess in any known coin; for these include our great merchants, our judges and lawyers, and medical men, our statesmen and chief legislators; they include our poets and writers of all kinds, musicians, painters, and philosophers; and our princes, who certainly do more for the wealth and welfare of the country than can be told in money.—*Sir James Paget.*

Value of Veratrum Viride as a Prophylactic against Peritonitis after Surgical Operations involving the Opening of the Peritoneal Cavity.—Dr. James Roane, of Yankton, Dak., writes: "On August 25th, assisted by Drs. D. F. Etter, and W. H. Turkopp, I operated upon R. S——, a short and spare

Bohemian, aged fifty-five, for the relief of strangulated hernia (right, complete oblique inguinal). A careful and thorough trial of the taxis, at first without the aid of anæsthetics, and subsequently when they were administered to the surgical extent, had failed to produce reduction. Owing to the urgency of the symptoms, the operation was performed at night, and was more protracted than it would otherwise have been on account of the very poor light of a single lamp. The intestine was found to be deeply congested, but showed no signs of disorganization. The constriction was at the internal ring, and its division was followed by the escape of about two ounces of sanguineous serum. The hernia having been reduced, the upper three-fourths of the incision were closed by sutures, and the lower fourth left open for drainage. Throughout its various steps the operation was conducted under strictly antiseptic precautions—a solution of corrosive sublimate, one to two thousand, being used for that purpose. A pledget of absorbent cotton, soaked in this solution, was placed over the wound; this was covered by a larger pad of cotton, and the whole was held securely *in situ* by a few turns of a roller bandage. On coming from under the influence of the anæsthetic the patient vomited stercoraceous matter profusely. He was put to bed, given one-fourth of a grain of morphia hypodermically, and placed upon one minim of Norwood's tincture of veratrum viride, and ten minims of deodorized tincture of opium, every two hours—day and night. This treatment was followed up to the morning of the 28th, when it was discontinued because of the fall of the temperature, the total absence of any of the signs of peritonitis, and the increasing prostration of the patient. The physiological action of the veratrum viride at this time was very marked, manifesting itself in the sense of extreme muscular weakness, and in the slow, moderately full, but soft pulse, which became very rapid on the patient's making the least exertion. At no time after the operation were there any of the local signs of peritonitis, such as pain, tenderness, or tympanitis. The highest temperature (taken under the tongue) was 100.8°; and this occurred on the evening of the 26th. On the 29th the temperature was normal, and subsequently it did not rise above 99°. In that portion of the incision which was closed by means of sutures, union took place by first intention. A slight serous discharge oozed from the lower fourth, left open for drainage for forty hours, but thereafter no stains could be detected on the cotton dressing, and the wound rapidly closed. On September 9th a well-fitting truss was applied, and the patient discharged.

The Modern Iter ad Astra—a Medical Fable.—Once upon a time a poor but humane physician was riding along a road which led by a dark forest, when he saw by the wayside a sick and miserable dog which had lain down to die. Moved with pity he got down from his carriage, picked up the poor animal tenderly, and gave it some food and drink. Suddenly the dog vanished, and he saw standing before him a beautiful fairy.

"You have saved me from a miserable doom by your compassion," she said. "Command now anything you wish, and it shall be yours."

The astonished physician replied, "I am a poor man. I should like to be rich."

The fairy waved her wand, and extended to him a piece of paper and a bottle filled with a dark-colored fluid. "Here," she said, "is a prescription for an Infallible Compound Hair-Restorer. It will never fail, and it has been indorsed by all the leading clergymen on both continents. The world is yours! Do you wish more?"

"I am a quiet man," replied the doctor, "and little known. I should like to be famous."

"You shall be more; you shall be immortal." Waving her wand again, she presented to him a small, dark, and curiously shaped instrument. "See," she exclaimed, "it is a new and 'Unquestionably Perfect Pessary.' It radically restores every malposition. Your name is blown into the side. Generations of suffering women and successful doctors will read, and bless you. I have tried it myself," she added, blushing a little, and vanished.—*Boston Med. and Surg. Journal.*

Renal Calculi and their Removal by Manipulation.—Dr. J. P. Shafer, of Parkersburg, W. Va., sends us the history of a patient, a married lady, thirty-four years of age, who for two years suffered greatly from pains in the back, left iliac region and hip, and retention of urine. This finally culminated in hip-joint disease, an abscess breaking into the vagina, the left limb being shortened one and a half inch. She had also cystitis, and later some hysterical symptoms. In the course of a year she developed violent symptoms of renal colic on the left side. She passed gravel in the urine. Feeling sure that she was passing calculi through the ureters, Dr. Shafer conceived the highly novel plan of helping them along by manipulation. He describes this in the following language: "The patient being placed upon her stomach, so that I could get with my fingers down upon the kidney, by firm pressure, working my fingers, pressing and pulling toward me, I soon found I had changed the seat of pain to another point a little forward, which she could locate by the touch of her finger over the location of the stone, and so I continued this manipulation at intervals, removing each time the stone several inches before stopping to rest again, and each time before again commencing she would locate the point at which the stone was, and so I proceeded until I felt, as well as she, it pass from under my fingers, as I supposed, into the bladder, and which afterward proved to be true. As soon as it passed into the bladder the agonizing pain and muscular spasms ceased at once and the patient became cheerful. She being relieved for the time was happy, and I having performed this feat, the like of which I had never read, heard, nor dreamed of before, of course I was quite well pleased at my success." From this time forward, for the next ten days, she passed calculi every day, the passage being assisted by Dr. Shafer. Then she passed no more for fourteen months, when the attacks began again and continued in the same way and with the same treatment. Dr. Shafer secured some of the calculi, one of which, he says, measures one to one and one-eighth inch in length, by one-half to three-eighths inch in width. He states that he forwards to us some specimens. We have not, however, received them. The patient is still living, and has been seen and manipulated by other physicians. Our correspondent says truly that the case is a very extraordinary one. The fact that the woman is hysterical, suggests the probability of some voluntary or involuntary deception.

Acute Iodism after Three Five-grain Doses of Potassium Iodide.—J. B. Parker, M.D., Surgeon U.S.N., writes: "Extracted from *Journal de Médecine et de Chirurgie Pratiques*, in The Record of the 6th ult., is mention of a case of acute iodism after a single dose of fifteen grains of iodide of potassium. I beg to present the following case, as probably equally severe, after the administration of the same quantity of iodide of potassium in three five-grain doses—morning, noon, and night. Patient, aged forty, a man of superior physique and health, had acute rheumatism in right shoulder. The first evening he came under observation one-sixth grain of morphia sulph. was administered hypodermically, after local dressing with warm laudanum, flannel, cotton, and rubber cloth. Following day patient was given ten grains of bromide of potassium, p. r. n., to relieve pain and induce sleep. This failing to afford the relief desired at night, it was discontinued, and a solution of bromides of potassium and sodium, of each ten grains, and of lithium five grains, was directed to be taken during the day if required, and hourly at night if pain prevented sleep. The succeeding day (fourth) no medicine was taken save three or four doses at night of the bromide mixture, as was

taken during the previous night. The acute symptoms having in great part subsided, he was directed, for the fifth day, five grains of iodide of potassium morning, noon, and night. On the sixth day patient suffered severely from iodism, which he ascribed to *taking cold* during the night, yet was much puzzled to explain its origin, as he had not left his bed and was not aware that a current of air could reach him. When the real cause of his suffering was mentioned he remarked that the remedy was as severe as the disease and preferred not to continue it. The symptoms, which disappeared in twenty-four hours when the medicine was discontinued, were as follows: Pain and constriction in region of frontal sinuses; puffiness and suffusion of eyes, with lachrymation; sneezing and secretion from nose; soreness of jaws and mucous membrane of mouth and throat; ptyalism; cervical glands on left side enlarged and painful; small but painful abscess on helix of left ear, which suppurated and was discharged."

A Breach of Professional Etiquette.—The following story is told of the celebrated Oppolzer. Shortly after his arrival in Vienna he was consulted by an invalid, whom he advised, after a somewhat hasty examination, to go to Pistyan, in Hungary, and take the waters. After several months the man, whom the professor had forgotten, again presented himself, with an aggravation of all his symptoms, and said he had just returned from a course of the Pistyan waters. The professor examined him, this time rather more carefully, and then, with some wrath, asked him what confounded ass had advised him to go there, as it was the worst thing he could possibly have done. Moral: Always speak well of your neighbor.

Whiskey as an Anæsthetic.—In his address as President of the Ninth Annual Session of the Arkansas State Medical Society, Dr. Keller is reported to have spoken as follows on the subject of whiskey as an anæsthetic: "To Dr. Link, of Indiana, are we indebted almost entirely for having gone far toward placing whiskey not only along with ether and chloroform as an anæsthetic, but also in discovering its antiseptic power, equally as safe and effective as any other. So well satisfied is that gentleman from long use of it as his only anæsthetic and antiseptic in amputations, that he asserts he has discarded all others, and in his reports of several hundred cases, he says that he has seen no manifestation of pain during any amputation, no unhealthy action in any stump, and not a single death to mar the report." The manner of anæsthetizing the patient seems to be to administer one or two ounces of whiskey by the mouth every ten minutes "until complete drunkenness is reached," and then, with or without one or two inhalations of ether or chloroform, to proceed to operate. On the face of it, this procedure appears to be open to righteous condemnation. It is well known that acute gastritis may be set up by such means, and the onus of proving that such large imbibitions of alcohol are inoffensive rests with Drs. Link, Keller, and others who may choose to employ the drug. It is possible—anything is possible in medicine—that such treatment may be innocuous; but until more accurate knowledge is forthcoming we prefer to believe to the contrary.—*Lancet.*

Every-Day Physiology.—The weight of a full-grown man should be 154 pounds, distributed as follows: Muscles and their appurtenances, 68 pounds; skeleton, 24 pounds; skin, 10½ pounds; fat, 28 pounds; brains, 3 pounds; thoracic viscera, 3½ pounds; abdominal viscera, 11 pounds; blood which would drain from body, 7 pounds. This man ought to consume per diem: Lean beefsteak, 5,000 grains; bread, 6,000 grains; milk, 7,000 grains; potatoes, 3,000 grains; butter, 600 grains; and water, 22,900 grains. His heart should beat 72 times a minute, and he should breathe 18 times a minute. In 24 hours he would vitiate 1,750 cubic feet of pure air to the extent of one per cent.; a man, therefore, of the weight mentioned ought to have 800 cubic feet of well-ventilated space. He would throw off by the skin 18 ounces of water, 300 grains of solid matter, and 400 grains of carbonic acid every 24 hours, and his total loss during the 24 hours would be 6 pounds of water, and a little above 2 pounds of other matter.

Dogmatic Therapeutics.—The following, from the *Clinical Record*, is an interesting bit of dogmatic teaching, illustrating its attractiveness and its dangers. Item by item it is, if not absolutely incorrect, an expression of half-truth. For chronic constipation, Professor DaCosta has found kneading the bowels to be far more effective than electricity. The best American water for this trouble is Saratoga Congress, but no water should be used continuously. Aloin is the best medicine, and "nothing can be better than a pill of aloin, rheum, belladonna, and capsicum, all in small doses."

Gastric Hysteria and Reflex Uterine Vomiting.—Dr. E. Frank Lyceston propounds four queries upon the above subject. As a general answer we can only say that gastric hysteria and hysterical vomiting may be quite independent of ovarian or uterine irritation.

Shakespeare's Physician.—In the churchyard at Fredericksburg, Va., is a tombstone on which may be deciphered these words:

"Here lies the body of
EDWARD HELDON,
Practitioner in Physics and Chirurgery. Born in Bedfordshire, England, in the year of our Lord 1542. Was contemporary with, and one of the pall-bearers of William Shakespeare, of the Avon. After a brief illness his spirit ascended in the year of our Lord 1618—aged 76."

Increase of Epidemics in Paris.—All epidemics, except scarlet fever, have increased in Paris since 1865. The deaths from measles have increased from 31 to 46 per 100,000; from pertussis, 10 to 19.5; from 43 to 100. Dr. Jacques Bertillon, who gives these facts, thinks that there ought to be a more careful medical supervision of public schools.

Mistakes in Words.—In an editorial criticism upon this subject the *Medical News*, says the *Medical Press and Circular*, "falls into the error, common in republics, of assigning the quality of nobility to the title Sir, since he writes that William Klame, who had been quoted by Siredy as Sir William Klame, is a poor substitute for William Klapp, and it is not compensated for by the title of nobility which precedes it."

An Observation Regarding Menstruation in Animals.—Dr. S. A. Evans, of Conway, N. H., writes: "For several years past I have kept a non-pregnant cow, for the purpose of supplying my family with milk. Have kept a record of periods of heat. Find they recur once in twenty-one days. Are accompanied, first, by a discharge of gelatinous material from vulva, which, after some hours, becomes slightly tinged with blood. The color becomes gradually more pronounced, until within twenty-four hours it appears to be pure blood. Periods last about forty-eight hours. At these periods only can the cow become impregnated, which would seem to show that in her case ovulation and menstruation are simultaneous. These observations have extended through three winters, and in two different animals."

Half a Ton of Serum from the Abdominal Cavity.—Dr. D. Dickinson, Surgeon U. S. N., Mare Island, Cal., sends us the following note: "Nicholas G——, seaman, native of Greece, aged twenty-eight years and two months, was admitted from the Naval Hospital, Yokohama, Japan, on August 18, 1884, and discharged for transportation East, August 31, 1884, as he was anxious to reach Greece before he should die. His hospital ticket stated disease to be dilatatio cordis (et ascites). Within the past seventeen months his abdomen has been aspirated sixty-nine times, withdrawing nine hundred and forty-four pints (nearly half a ton) of serum."

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Original Articles.

THE APPROACH OF THE CHOLERA AND THE NECESSITY OF BACTERIOSCOPY.

BY EDMUND C. WENDT, M.D.,
NEW YORK.

THE epidemic of cholera which commenced last June at Toulon, has already killed many thousands. It still continues to spread, fortunately, however, with diminished fatality. Nevertheless, the experience of past epidemics should warn us of the possibility—nay, even probability—of its being carried across the ocean to our own shores. Indeed, most authorities confidently anticipate its approach next year. Now, unless we take efficient action in the matter while there is yet time, the dreaded scourge may find us so poorly prepared that widespread disaster must inevitably result.

As has been pointed out by Sanitary Engineer Wingate in a leading daily, published November 23d, "despite the precautions taken by the health officials, no one who is at all familiar with the sanitary condition of New York City can doubt that if the plague once gains an entrance into the metropolis, it will find many nesting places among the dives and slums in certain quarters, whence its baleful influence will spread far and wide. Chief among these hotbeds of disease which constantly invite infection, are the Italian and Hebrew quarters, the former occupying the region of Mulberry, Baxter, and Crosby Streets, and the latter the district in the vicinity of Ludlow, Essex, Hester, and Forsyth Streets." The nuisances on the east side of the city are likewise a source of constant discomfort and serious danger. The same journal has the following editorial comment relative thereto:

"This evil is none the less great because of its long standing. But legal obstacles, red tape, procrastination, or what not, have resulted in the continued exposure of our citizens to the emanations of manure heaps, stagnant drainage, and reeking vats. Here is added cause for Herbert Spencer's wonder at the long-suffering and patience of Americans under imposition. A complaint has been lodged before the State Board of Health, and a heroic band of Beekman Hill women have invaded the pestilential haunts of the malodorous offenders and secured testimony for the consideration of the Grand Jury. These women have pluckily taken in hand duties which devolve upon our Health Department. They have had the courage of their convictions. Where are the courage and the convictions of the officials supposed to care for the sanitary conditions of this city?"

At present "it is more important than ever before that the people of this city should live under the best sanitary conditions. The east side nuisances have been endured too long. They should have been abolished long ago. They must be done away with now."

Such impressive warnings should not go unheeded. And it is quite creditable to our Quarantine Department that it shows renewed vigilance in the matter of preventing contagious diseases from entering our city. Nevertheless, the fact that a fatal case of yellow fever has been quite recently introduced into the city through the failure of the authorities to detect the disease, shows that the medical service of Quarantine is not altogether what it should be. This is still further shown by a resolution adopted at the last meeting of the State Board of Health, held a few days ago, calling the attention of the Governor to the bad condition of the buildings and equipments at Quarantine, and recommending that proper steps be taken for putting them in perfect order.

In the *London Practitioner* for November, 1884, there appears a careful report of the present cholera epidemic in Continental Europe, which shows conclusively that the secret of success in carrying into effect the system of medical inspection and isolation is to be prepared beforehand. And it is impossible to urge too strongly upon local authorities, whether on the coast or inland, the adoption of such an organization and the establishment of such means of isolation as shall enable them to deal with imported infection in its earliest stage.

Dr. Buchanan, F.R.S., in an excellent article on "Precautions against the Infection of Cholera," points out that, it is important for the public very distinctly to remember that pains taken and costs incurred for these purposes cannot in any event be regarded as wasted. The local conditions which would enable cholera, if imported, to spread its infection in any country, are conditions which day by day, in the absence of cholera, create and spread other diseases: diseases which, as being never absent from the country, are in the long run far more destructive than cholera itself. The sanitary improvements which would justify a sense of security against any apprehended importation of cholera would, though cholera should never reappear, give amply remunerative results in the prevention of those other diseases.

The Practitioner says further as having a bearing on this point, "It is also worthy of note that the value of being prepared in advance has been strikingly illustrated during the course of the Italian epidemic. The contrast between Naples and Rome supplies the illustration. In Naples cholera, when once imported, found in the results of centuries of sanitary neglect a soil congenial to its rapid development, and terribly the city has suffered in consequence. But Rome had learned a lesson which even the history of previous epidemics had not impressed on Naples. The Eternal City had provided itself with an abundant and wholesome water supply, and with an efficient system of sewerage, and it had, in addition, adopted other measures calculated to promote the health of its inhabitants; the result being that, although cholera was on five separate occasions imported into the city, no difficulty was experienced, by means of measures of isolation and other sanitary precautions, in preventing any spread of the infection."

It is to be hoped that such positive lessons may not prove barren of practical results. But while physicians and sanitarians are fully alive to the danger before us, they have neglected one point that may be, and probably is, of the highest importance. It is obvious that the earliest possible recognition of the very first case of cholera that might appear among us, would give us the best chance for prompt action to prevent any extension of the disease. Now, it is a lamentable fact that the most careful analysis of symptoms does not always enable us to distinguish, in a given case, cholera morbus from genuine Asiatic cholera. Indeed, it is held by some physicians that the two diseases differ in degree only, and not in kind.

Without stopping to consider this point, we must yet face the fact that our usual methods are inadequate to differentiate with absolute certainty an attack of violent and fatal cholera morbus from one of true cholera. The kind of reasoning hitherto employed by physicians has necessarily been of the *à posteriori* variety. That is to say, if a suspicious case recovered, and was not soon fol-

lowed by other and rapidly fatal cases, the disease was classed as cholera morbus. If, on the other hand, the first suspicious case was quickly followed by an increasing number of fatal cases, the diagnosis of Asiatic cholera was subsequently made. Manifestly, a method of this kind might give the cholera a chance to secure a dangerous foothold before being recognized as such; and one need not be an alarmist to entertain grave apprehensions should such a misfortune befall us. But in view of recent discoveries, it now seems possible to decide positively and in a very short time whether we are dealing with the comparatively benign cholera nostras, or with the eminently malignant Asiatic cholera.

The finding of the specific organism of cholera by Koch was no surprise to those who had long since concluded, without this final and convincing evidence, that cholera must be a parasitic disease caused by a particular and distinct microbe. The grounds on which Koch based his assertion that the comma-bacillus was the causative agent of cholera were, that it was found to be present in all well-marked cases of the disease, and, further, that it was never present in the healthy body or in cases of any other disease.

Koch's conclusions were accepted without hesitation by those who know him best, and who have had occasion to witness his conscientious and painstaking methods of conducting all scientific work. Thus, in Germany, Herr Von Gossler, Minister of Public Worship, Education, and Medical Affairs, has already ordered that a certain number of medical men are to be summoned to Berlin every year to go through a course of study, lasting from a fortnight to three weeks, in order to learn the new methods of investigation connected with bacteria and microorganisms, but chiefly to become acquainted with everything connected with the comma-bacillus and the methods of cultivating it according to Koch's method. The several Federal Governments have been likewise officially requested to select a number of medical men for this course, and to inform them to hold themselves in readiness to come to Berlin. According to the latest Berlin advices these courses are now in active operation, and are very largely attended.

In our own country, however, there is still, even in the ranks of the medical profession, an unfortunate disposition to regard the entire subject of bacteria as trivial or fanciful, and unworthy of serious consideration. There are of course some notable exceptions to this rule. Thus Dr. Austin Flint, Sr., in a recent paper on cholera expressed his unqualified belief in the truth of Koch's assertions. He showed that, wherever cholera appeared the complete destruction of the parasite directly it left the body could be secured, and by this means every case of the disease would be rendered sterile. Koch had proved that the cholera microbe was readily killed by drying, while cold did not destroy its vitality. The local conditions under which the parasite would thrive best outside the body were not yet definitely known, but there could be no doubt whatever that filth was very favorable to its development. Inside the body Koch had shown that the acidity of the gastric fluids was inimical to it. In order that an individual should contract cholera it was probable that there should be a predisposition or susceptibility to it, as was the case in tuberculosis. Hence when we hear it credibly reported that Dr. Klein, of London, a member of the English Cholera Commission now investigating the disease in India, in order to show his disregard for, and lack of faith in, Koch's comma-bacilli, made a meal of them, we can well afford to laugh at such puerile business. Indeed, the *Berliner Klinische Wochenschrift* says: "We had looked for something better from Dr. Klein, and must confess that this so-called auto-experiment gives us no great idea of the discernment and powers of criticism of the abovenamed gentleman." And the *British Medical Journal*, fully appreciating how ridiculous the affair is, states that everybody in London ridicules the experiment.

To-day there seems no longer any possible doubt about the significance of the cholera bacillus. In the *German Medical Weekly* of November 6, 1884, just to hand, Koch has finally disposed of the various objections that had been made against the binding force of his assertions. He has proved by actual scientific demonstrations that the comma-bacillus is the specific micro-organism of genuine Asiatic cholera. The disease has also been artificially produced in animals by the introduction of pure cultures of the parasite in question.

It is not necessary here to reproduce Koch's last article; enough has been said to show that in scientific bacterioscopy we have quite possibly a ready means of detecting with certainty the existence of cholera. But in order to familiarize ourselves with the necessary details of these modern methods, earnest study and some experience are essential. I hold that we have not the right to ignore the light that has been shed on the true nature of infectious diseases by the keenly searching spirit of modern experimental inquiry. In my opinion, it is the duty of our Government to imitate what has been already done abroad. Physicians, or other competent persons, should be sent to Berlin at the expense of individual States, or the Federal Government, to join the classes that have just been organized under Koch's supervision. They should become personally familiar with every step of his painstaking and strictly scientific methods. In a few weeks, or at most months, they could return and be experts and teachers of modern bacteriology.

Should this be found impracticable, however, then let the State Health Boards organize properly equipped laboratories for the purpose of affording suitable facilities for this kind of study and research. Individual physicians with sufficient time and private means should take an active interest in all that relates to the examination and cultivation of bacteria. Is the medical profession of our country to be put to shame by its attitude of apathy toward matters of serious concern to the public welfare? Are we to be made the laughing-stock of our transatlantic confrères? Two well-known physicians of our country have already attempted to overthrow the diagnostic significance of the bacillus of tubercular consumption, the one by claiming it to be a fat-crystal, the other by asserting its identity with shreds of fibrin. But neither the one nor the other had at the time of his pretended discovery ever beheld the true bacillus tuberculosis. To avoid similarly ridiculous errors we need expert teachers of bacterioscopy. This new and highly important branch of medicine should be made an essential and obligatory part of the regular medical curriculum.

That scientific bacteriology is as yet in its infancy all will admit. But let us not blindly ignore its actual accomplishments. We may never be able perhaps to completely eradicate consumption or suppress all contagious diseases, but at present we are without the slightest doubt nearer to such a desirable consummation than we were before the era of bacterioscopy. This is a most important epoch in medicine, and it has been well said by an eminent physician of New York: "It would be to the present era that posterity would look back as the time when those signal discoveries were made which led to the final adoption of the parasitic theory of the origin of all infectious diseases. Was the medical profession in this country to have an active share in this great work of investigation and in these brilliant discoveries, or was it to be content to wait patiently until the announcements of the results of their labors were made by the scientific men of Europe? There was certainly no lack of ability on the part of American medical men, but it seemed to him that there was, at all events, a certain want of self-reliance and energy." If our State authorities are unable or unwilling to help the good work, let the munificence of private citizens proclaim to the world that democracy is at least not inferior to paternal forms of government in producing noble specimens of the *genus homo*.

102 East Fifty-seventh Street, November 25, 1884.

CASES OF STRANGULATED HERNIA, WITH REMARKS ON TREATMENT.[1]

By GEORGE F. SHRADY, A.M., M.D.,

NEW YORK.

During the past few months in my service at St. Francis' Hospital, I have had rather an unusual experience with strangulated hernia, in the number of cases treated within a short period. It rarely happens in the general surgical practice of our hospitals that any surgeon is called upon to operate upon eight cases within a period of seven months. To this number may be added one occurring in private practice, in consultation with my friend Dr. McCreery, making a total of nine. When it is also stated that in these herniotomy was successfully performed, we can scarcely go farther in estimating the results of a desirable experience. It has occurred to me that, with the risk of not presenting anything strikingly novel to the surgeon, some remarks addressed to the general practitioner, and based upon personal experience in these and other cases, might under present circumstances be acceptable.

A leading physician in a rural district once remarked that it was always interesting to him to learn what was the treatment of the ordinary diseases in the large metropolitan hospitals. Even the details of such practices, commonplace as they might appear to be, were assurances to him that nothing better was known. With a view also of making a contribution from such a standpoint these cases are presented, in the hope that the consideration of some practical points connected with them may elicit discussion. It is not proposed to give more than a brief outline of their histories. In so doing I have availed myself of the notes of Dr. J. H. B. Browning, House-Surgeon to St. Francis' Hospital.

It is presumably unnecessary to say that in all these cases there were well marked symptoms of strangulation, inability to return the gut by judicious taxis, and unmistakable local evidences of firm constriction of the gut itself demonstrated by the operations.

Case I.—Jacob P——, aged forty, was admitted to St. Francis' Hospital, New York, March 4, 1884, the third day after the appearance of symptoms of strangulated hernia. Vomiting was stercoraceous, pulse small, features pinched, surface cool, with other symptoms of general prostration. The hernial tumor in the right groin was not noticed by the patient until immediately after a strain, three days before. The patient was etherized, and judicious taxis having failed, herniotomy was performed without delay. A single knuckle of small intestine was involved. Its surface was of a brownish hue, was mottled with extravasations, but at no point was it gangrenous. After dividing the point of constriction at the neck of the sac, the circulation of the gut was restored under the application of hot moist towels, and the hernia duly returned. The wound healed by first intention, and the patient was discharged well, April 2, 1884, with the advice to maintain inguinal support for a period of several months.

Case II.—Catharine B——, aged sixty-five, was admitted to the same hospital, March 15, 1884, with so-called dyspeptic symptoms, associated with a tumor in the left groin. A careful examination revealed the existence of an irreducible femoral hernia, but the patient could give no intelligible account of symptoms of strangulation. In the course of a few hours persistent vomiting with colicky pains occurred. It was then ascertained that these were the dyspeptic symptoms from which she had suffered for the previous two days, and that up to that time she had been able to "put the bowel back." In short, the case turned out to be one of strangulated femoral hernia, and was operated upon without delay.

The gut was found to be gangrenous at a point where it impinged upon the edge of the unyielding crural opening. The sloughing portion was removed, the edges of the wound in the gut closed, and in turn attached to the margin of the ring. The two or three lower stitches of the wound gave way at the end of the fourth day, and through the opening thus made there was a small discharge of fecal matter. By means of compress dressings the fecal fistula closed after a week or more, the remaining wound healing by granulation. This patient, just as she was ready to leave the hospital at the end of the fifteenth day, was seized with a double pneumonia, from which she died on the third day. This, it is true, was a case of death, but not as the result of a successful operation, as the grim humor of an old saw might have it.

Case III. was that of G. P——, aged seventy-three. He was admitted to St. Francis' Hospital March 27, 1884. Two days before, an old inguinal hernia on the left side had come down after a slight strain, and could not be returned. A physician was sent for who made vigorous efforts at taxis. Vomiting then took place, and continued more or less until he was seen in the ward. The hernial tumor was very tender and turgid. The pulse was very feeble, and the patient was quite exhausted. The stricture, which was at the neck of the sac, was divided, and the mahogany-colored gut was nursed in hot moist cloths for a full half hour before it could be returned. The wound healed by second intention, the granulations and subsequent cicatrization completely plugging up the hernial opening. The case progressed without a bad symptom, notwithstanding the bowels did not move until the fourteenth day after the operation.

Case IV.—John B——, aged forty-one, was admitted to St. Francis' Hospital, April 23, 1884. The day before, while in the act of lifting a heavy box, an old hernia in his left groin was forced down, and became very hard and immovable. Pain and emesis occurred two hours after, and continued at short intervals during the following night. Stercoraceous material was being vomited on admission. The usual signs of strangulation were present. Fortunately, but little taxis had been employed outside the ward. Herniotomy was performed without delay. One large knuckle of gut was found to be firmly constricted, diffusely mottled, and mahogany colored. Wound healed by first intention. Patient discharged, May 25, 1884.

Case V.—James R——, aged sixty-one, began to suffer from strangulation of an old hernia on the morning of May 10, 1884, and was admitted twelve hours after with well-pronounced symptoms, including stercoraceous vomiting. There had been so much taxis employed previous to admission that the parts were much swollen, inflamed, and tender. Portions of gut and omentum were involved in strangulation. The gut, when exposed, was found to be of a dull brownish color, and somewhat œdematous. The fluid in the sac was dark-colored. Omentum was deeply congested. Circulation in gut restored under hot applications. The strangulated omentum, which was of small size, was duly excised. The day after operation the temperature was 101½° F. Subsequently there was nothing worthy of note, save that the stitches gave way in the wound, the latter closing by granulation, and apparently permanently curing the hernia. The bowels moved on the seventh day. Patient was discharged June 9, 1884.

Case VI.—Theodore J——, aged sixty-two, had an old inguinal hernia also, which became strangulated after a violent effort at coughing, on June 10, 1884. He was admitted to the hospital the same day in an extreme state of prostration from a persistent vomiting of several hours. Herniotomy was performed within eighteen hours after the accident. A large knuckle of gut was in a dark-brownish, mottled condition, but its circulation was duly restored under application of towels wrung out of hot water. A portion of omentum, also strangulated, was ligated and removed. The wound healed by granulation. Patient was discharged, apparently radically cured of hernia, August 3, 1884.

Case VII.—F. W——, aged forty years, while lifting forced down an old inguinal hernia, which became strangulated. Within a very little while after the accident he grew faint, was nauseated, and vomited the stomach con-

[1] Read before the Practitioners' Society of New York, November 7, 1884.

tents. In spite of a determination to continue at his work he was forced to go home, when vomiting recurred and continued more or less for two days. When admitted to hospital at the end of that period, August 20, 1884, he was much exhausted. He was unable to retain water in his stomach, and the slightest movement was attended with a retching gulp. Herniotomy was performed as soon as the patient could be anæsthetized, forty-nine hours after strangulation. The gut, which was a single knuckle, was firmly constricted in its whole circumference, but not gangrenous. The wound healed by first intention, and the patient, when discharged, September 15, 1884, gave no evidences of a return of the hernia. The bowels moved naturally on the fifth day.

Case VIII.—A. G——, aged eighteen, while adjusting a portion of the load on his truck felt a giving way in his right groin, and immediately after found a good-sized oblong tumor extending into his scrotum. Feeling very faint, and suffering from considerable pain, he went to his home. There the pain increased and free emesis occurred. A physician was sent for, who, recognizing the condition, attempted to reduce the gut and failed. The patient was allowed to rest until next day, when efforts at taxis were renewed, also without avail. Vomiting by this time had become so violent and persistent that the patient was sent to the hospital, after having suffered from symptoms of strangulation for three days. The diagnosis of congenital strangulated hernia was then made and subsequently confirmed.

On slitting open the sac there was a gush of dark venous blood, which came from the previous rupture of a vein in a large mass of strangulated omentum. Together with this epiplocele there was an œdematous, ashy-colored, mottled knuckle of gut, which at first sight appeared to be hopelessly gangrenous. The omentum, which had forced its way into the sac of the tunica vaginalis, was withdrawn, and found to be so suspiciously mottled and inflamed that its veins were at first carefully ligated separately and then *en masse*, and the whole was cut off. This portion of omentum measured 15¼ inches in one diameter, and 8½ in another. The omental stump was used as a plug for the hernial canal. There were recent adhesions between the strangulated gut, which were carefully severed. It required fully twenty-five minutes of soakage of the gut in hot, moist towels to insure its being in a proper condition for return. The wound, on account of previous inflammation around it, did not close by first intention throughout. It opened at its lower portion, and eventually healed by granulation, leaving the hernia, as I believe, radically cured. The bowels moved on the ninth day.

When Dr. Browning, the House-Surgeon of St. Francis' Hospital, called on me with the foregoing histories, which he had kindly prepared for my perusal, I found that there were but eight cases instead of nine, as I expected. By a curious coincidence my friend and neighbor, Dr. J. A. McCreery, called the same morning (October 13, 1884), asking me to operate on the following case of strangulated femoral hernia in his practice:

Case IX.—Mrs. M——, aged thirty-five years, had suffered from a reducible femoral hernia for years, wearing a truss most of that time. On the evening of the day before she was seized with a severe fit of vomiting, which she thought was due to the gastric disturbances of pregnancy, she being three months advanced in that condition. When she recovered from the attack, she discovered that the hernia was much larger and immovable. After several fruitless attempts to return the gut she summoned Dr. McCreery, who in turn asked me to see her with him. I did so without delay, discovered a strangulated femoral hernia, and performed herniotomy at once, with the result of relieving immediately all the urgent symptoms. The sac contained darkly colored gut and a small nodule of omentum. These were both restored, and returned after the stricture was liberated. The patient has made a perfect recovery.

So much for the synopsis of the cases. It is always worth our while in noting successes to explain, as best we can, the reasons for them. Even if for the most part they be not new, they have at least the merit of being true, thus adding weight to practical experience. Such, at least, is a healthy offset to methods which may be new, and yet not true. But let us remark on the matter, in a general way, that we may take a short cut to conclusions.

My experience with cases of strangulated hernia has taught me that taxis is very much overdone. Hardly a case comes to us which is not the worse for it. The temptation to use more or less force is too great for most men to resist. The late Professor Gilman, in his admirably impressive lectures on obstetrics, would charge his hearers not to grasp the cord in attempting to deliver the placenta. "If you have a temptation to pull it, it is better not to touch it at all." Discreet teachers of surgery tell their students to use only a soft catheter to empty the bladder, and for a like reason. Few beginners understand what is meant by merely guiding a solid instrument through the deep urethra, as there is almost always an irresistible tendency to push it along its course. I would say to the practitioner who is not prepared to operate for strangulated hernia, that a safe rule is not to persist in taxis after the first judiciously gentle efforts at reduction. If he goes beyond this he rarely appreciates how much force he is apt to employ before he is willing to give up the fight to another. The patient generally has the best chance with no taxis at all until he is etherized for a possible herniotomy. No time is thus lost, and the operation can be performed as soon as it is decided that taxis availeth not.

Every one knows the rule to operate at once on an irreducible strangulated hernia. This goes without the saying. I am convinced, however, that there are many who do not appreciate its full force, even when cases are recognized early. There seems to be a temptation to hope against hope that an operation may be avoided. And yet the operation in itself is not dangerous. Even in case of doubt in diagnosis, and there are not a few of such to which this remark will apply, it is safer to herniotomize the patient than to let him alone, trusting to chances. Every practitioner of large experience can call to mind cases mistaken up to the last moment, when hope for saving has virtually passed, and when herniotomy is blamed for throwing the balance on the wrong side.

Even such cases should not, however, be looked upon as absolutely desperate ones. Mr. Birkett refers to a femoral hernia which had been strangulated for fourteen days, and upon which successful herniotomy was finally performed. In view of this fact it is the duty of every surgeon to operate upon cases of long-continued strangulation, unless the patient be actually moribund at the time. In one of the successful cases reported the symptoms had lasted for forty-nine hours.

It is, of course, not always easy to decide whether or no strangulation actually exists. The rule should always be to give the benefit of the doubt to the operation, and act promptly. The main tests for strangulation are pain, tenderness, and continuous vomiting, with a recently irreducible hernial tumor. Men in hospital practice, who see a great deal of hernia, always examine the groin when persistent vomiting exists. The candidate at hospital examination who would neglect to mention vomiting as a symptom of strangulated hernia would get a black mark.

To say that herniotomy is a comparatively easy operation might surprise one who has never tried it, and who has timidly folded his knowledge in the seven anatomical layers. Certain drawbacks are naturally to be expected, and should be overcome on general principles. Living anatomy has a way sometimes of dodging the perceptions of the most expert operator. In herniotomy it is the rule. The layers are always ready to compromise their individuality under a becomingly cautious use of the director. The main thing to be sure of is when

the sac is reached, no matter whether the operator divides six or six times six layers before he gets to it. And sometimes in very old hernias he can take his choice.

The making of clean, free cuts, and always in the same line, invariably gives the best results. As a rule I prefer to open the sac, as I believe it does not add to the gravity of the operation, while it insures safety in other directions. I have not seen a case in which I was willing to do otherwise, and I do not believe I have lost one in consequence.

Too much stress cannot be laid upon the necessity of having the strangulated portion of gut in the best possible condition before returning it into the abdomen. Time is well spent in such endeavors. Nothing will accomplish the end in view more efficiently than the direct application of towels wrung out in a hot antiseptic solution. I have kept a suspicious knuckle of gut covered by turns in this way for nearly an hour, with the result of a perfect restoration of the circulation.

In the treatment of this as well as any other operation wound, the indications for cleanliness, drainage, and rest are carefully followed, nothing more. I have never believed that the antiseptic spray was necessary for a good result in any operation. You gain every bit as much, and with half the trouble, by thoroughly irrigating the wound with an antiseptic solution after the operation is completed. Corrosive sublimate solution (in the proportion of 1–1500) was used in my cases in this way.

I do not think it is a calamity for a herniotomy wound not to heal by first intention, as by granulation and subsequent cicatrization the hernial opening and sac are more likely to become occluded. The aim is, of course, for first intention. While closing the wound, and after inserting a decalcified drainage-tube, it is well to take several deep stitches through the entire substance of the sac at different points, with the chance of exciting adhesive inflammation, and thus obliterating the sac cavity. I succeeded by this method in four cases. After closing the wound, firm pressure is maintained, upon a warm, thick, moistened pad of sublimated gauze, by means of an ordinary spica bandage. The dressings are not disturbed as long as the temperature is normal, or until the wound is healed.

Partly as a precautionary measure against traumatic peritonitis, but principally for purpose of absolute rest, my patients are kept under the influence of morphine during the first four or five days after the operation. The bowels generally take care of themselves, and require no help unless evidences of intestinal irritation manifest themselves. One of the cases did not obtain an evacuation until the end of the fourteenth day, and made no complaint because he thought it was natural under the circumstances.

247 Lexington Avenue.

The Antidote Bag.—Mr. Martindale, of London, who was the first to adopt a suggestion to produce a bag fitted with every remedy and appliance likely to be needed in the treatment of a case of poisoning, has now further improved upon it by omitting some articles, as the stomach-pump, enema, catheter, etc., which are always at hand, and has thus not only rendered the bag more portable, but has been enabled to supply it at a greatly reduced cost. This smaller bag contains the following antidotes, which are labeled with directions for their use, viz.: dialysed iron, syrup of chloral, chloroform, aromatic spirit of ammonia, spirit of chloroform, oil of turpentine, acetic acid, tincture of digitalis, nitrite of amyl capsules, sulphate of zinc, ipecacuanha, bromide of potassium, calcined magnesia, tannin, and a hypodermic case with syringe and solutions of acetate of morphia, apomorphia, nitrate of philocarpine, sulphate of atropia, and nitrate of strychnine.—*London Lancet*, September 27, 1884.

SOME NEW FACTS AND CONSIDERATIONS IN THE DIAGNOSIS OF CANCER OF THE STOMACH AND CANCER OF THE PANCREAS.

By MIDDLETON GOLDSMITH, M.D.,

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It is pretty generally and well agreed that the diagnosis of primary cancer of the pancreas is always uncertain, if indeed it is ever possible; or, in other words, there are no agreed-upon signs surely diagnosing primary cancer of the pancreas. About the sum and substance of what our best diagnosticians lay down is to the effect that a painful tumor in the epigastrium, unattended by gastric derangement, such as anorexia, vomiting of coffee-ground like ejecta, or even bloodless vomiting, pain after eating, etc., may be set down as cancer of the pancreas.

When it is remembered that there are many cases of cancer that present during life no symptoms of gastric disturbance and no signs of epigastric tumor, it is apparent that the foregoing is not very reliable; and still further, when it is remembered that a cancer of the pancreas may exist and have the exact symptoms of simple stomach cancer minus only the hemorrhage, the physician attempting to determine as between cancer of the pancreas and cancer of the pylorus is adrift without a star or compass to guide him.

Now, it so happens that within the last two years I have met with three cases, one of cancer of the stomach, which had but one certain symptom and that one not laid down in the books; and also two cases of primary cancer of the pancreas, both of which had a symptom by which they could be diagnosed.

A Mr. B——, a butcher by occupation, aged between fifty and sixty years, for more than a year had been ailing. About two months before his death he consulted me on several occasions. His appetite was pretty uniformly good; his digestion was good to all appearance; he had no pain in his epigastrium; he had no coffee-ground vomiting, and indeed had vomited but once in six months. There was no tumor in the epigastrium. The abdomen was flat, collapsed like one suffering from chronic diarrhœa, and flexible all over save that at the epigastrium, and for a hand's breadth below the ensiform cartilage, the abdominal wall, from costal margin to costal margin, felt like a concave bridge of sole leather and unyielding to moderate pressure. Percussion was not dull enough, I thought at the time, for an hypertrophied left lobe of the liver. The patient's face had the look of a marked cancerous cachexia. *He had a peculiar fetor to his eructations.* It was not the rotten-egg odor—nor the odor of any of the ordinary fermentations of food, but the odor was that of the most odorous uterine cancer—once smelled, not easily forgotten. I have never seen this symptom mentioned. It is not a symptom laid down in the books. *Fetor of the breath* is often mentioned, but, as far as my observation has gone, it is not to be relied upon. A bad breath is so common in so many conditions; it comes of so many causes; it is so inconstant to cancer, apart from the indigestion it implies, but not always present in that disease, that it cannot be justly called pathognomonic. The fetid matters in the breath come from the lungs, bronchi, pharynx, mouth, or teeth. The fetor of eructations is from the contents of the stomach. A stomach whose contents would stink when opened after death, barring post-mortem putrefaction, is one from which the eructations might be supposed to give off in life the odors of the stomach opened after death, and before cadaveric putrefaction. Besides, the kind of odor is cancerous in these cases, not putrefactive. The two odors are different and distinguishable. To smell a cancerous womb and then a putrefying cadaver is to learn the distinction.

Inasmuch as many cancerous stomachs opened after

death have no cancerous odor, so many and a large majority of those having cancer during life have not fetid eructations. Yet when the eructations have that canonical fetor, that fetor is pathognomonic. From these considerations, cancer of the stomach was the best guess I could make. It proved to be correct on post-mortem. The left lobe of the liver had become adherent at some time to the stomach, and had been drawn, stretched out and thinned by the stretching, so as to cover the whole space mentioned above as being resistant to pressure. On lifting up the liver, to get at the stomach below, I tore the softened stomach open and there came a whiff of the odor of his eructations, an odor so pungent as to make it necessary for some of us to change our clothes before we could go home to dinner. It was a simple case of soft cancer involving the greater part of the stomach, as well as I could judge from a very brief examination before the autopsy was surrendered to the younger folks then and there present. The microscope proved it to be encephaloid. Now, here was a case of outrageous gastric cancer with not a single symptom peculiar to it save one, which attaches not so much to the organ diseased as the putrefaction of the matters contained in it, and that not one of the symptoms laid down by authors. Nor does this case stand alone. I remember seeing a cadaver placed on table for examination in Louisville, a good many years ago, in which the diagnosis had been pernicious anæmia, the case having not shown a single symptom belonging to cancer of the stomach. I remember the surprise with which the cancer of the stomach was greeted. There are on record a good many cases of this kind besides Abercrombie's celebrated one. So that it may be said there are in some cases of cancer of the stomach no stomach symptoms to exclude.

Of the two cases of pancreatic cancer, the first was that of a healthy-looking, spare little woman who came to me from Indiana for the treatment of what proved to be gall-stones. She had the usual symptoms which attend upon the passage of gall-stones from the gall-bladder, as well as the dark urine or the icterus which follow it. She was one of the few persons whom I have met in whom the projecting gall-bladder felt like a bag of beans. She passed large numbers of faceted calculi as well as some crystallizing and jagged specimens, which had not been long residents of the gall-bladder.

Along toward what seemed to be the approach to convalesence from the gall-stones, the appetite, which heretofore had been good, began to fail. Her pains, which had heretofore been at intervals (marking the passage of gall-stones), came to be continuous and gradually grew to be more and more intolerable. She had vomiting, but there was no blood in the vomit, she had an intensely sour stomach, gastric catarrh, and constipation. There was no increase of the stomach pain after eating.

Meanwhile her face began to show a cachectic look. About this time I thought I could perceive a very small hard lump a little below the pylorus when the stomach was not full of food. The tumor would always disappear after eating a full meal. This little tumor was hard, and somewhat painful to the touch. It was fixed. It did not ascend or descend, or otherwise alter its position as tumors of the pylorus do sometimes. All the while the patient kept taking opium to keep the pain subdued. But for all that the face, besides its cancerous suggestion, showed that cast of expression whose only name is the cachexia of pain. Then came a curious semi-delirium, with a far-off look which I have seen but twice. The most careful inquiry elicited no signs of fatty stools. There could be found no tumor of the liver, no disease of any other portion of the body; there were no glandular enlargements. So that I was compelled to the diagnosis of primary cancer of the spleen in addition to gall-stones.

After death, which occurred some six months subsequent to the discovery of the little neoplasm, below the pylorus, we found the liver (save a number of gall-stones in it) and the abdominal viscera healthy. There was no disease of the stomach save extreme atrophy, and the little tumor of the pancreas proved, under the microscope, to be a spindle-celled carcinoma. . . .

The third case was that of a Mrs. H——, living at that time at Factory Point, some thirty miles from Rutland. I saw her twice. I found her greatly emaciated and quite feeble. She had anorexia, occasional vomiting, and pain about the pylorus after eating. She stated that her pains were not *all* related to the times of eating, but she had other and greater pains during the night, which were sometimes relieved by changes of position, but would often endure all night.

When I first felt the epigastrium, she being recumbent, and the stomach empty, I found a tumor apparently about as big as a pullet's egg. The lump was round, hard, and to the touch nodular. It was painful to the touch, and seemingly could not be moved. Of that, however, I was not so sure, because manipulation hurt her so much I did not push this branch of the inquiry. I did not see the matters vomited, or notice the drooling her doctor afterward told me about. Her attendant had noticed nothing unusual in her stools or vomit.

At my next visit the symptoms were unchanged, except her body was failing and *no tumor could be felt in the epigastrium.* I found out after her death that on the morning when I first saw her she had eaten nothing, and that at my last visit she had just taken her usual meal. The trains would arrive at Rutland a little after 11 A.M., and arrive at Factory Point a little after 12 M., so that my arrival at the house—about a mile from the railroad station—would occur commonly about a quarter past twelve and half-past twelve—and half-past twelve is the canonical dinner hour for all Vermont.

The following is a history of the case from Dr. Wyman, of Factory Point, who, though not at the time in attendance, had seen of her more than her later physician:

"Last April she first consulted me in regard to her not being well. She complained of a neuralgic or rheumatic pain in the left side under the short ribs, and in the pit of the stomach. She had no appetite—guessed she was 'lazy,' as she was weak and tired. I prescribed for her two or three times during the month.

"In May she appeared about the same, only the pain in the side was at times worse. She had spells of it about 10 o'clock A.M., and I learned her nights were sleepless, and often she could not lie down on account of the pain. It was worse three or four hours after eating. She looked sallow and tired. The pain was dull and constant, at times more severe. It would start in the left hypochondrium, or a little above, and extend to just below the ensiform cartilage, and the space there was tender to pressure. She complained also of pain under the right shoulder-blade. Her bowels were regular, urine normal, tongue not coated, but color a little too dark, but not purplish. She seemed almost like one who some time had had malaria (she lived for two or three years, a few years ago, in Central New York), and I thought, perhaps, there was some remnant of that lurking in her system. So she continued, not very sick, but ailing, growing weaker and thinner; appetite fickle, often a perfect loathing of food; no thirst, and pains about the same until the middle of June, when she was taken worse; pain intense, but more in dorsal region, but alternating between that and side and stomach; quite a relax of the bowels, constant nausea, and once or twice she vomited. The ejecta was simply a watery fluid, slightly tinged yellow. On account of the pain in the back I examined the urine, but as its appearance was so natural I only tested it for sugar and albumen, and found none. The stools she described as being like those which occur in simple diarrhœa, and I did not examine them, as I could not ascertain that there was anything strange about them. I regret now that I did not see them.

"About this time I went West, leaving the case. She

had grown much more comfortable, although she failed very perceptibly during this acute attack. The remedies which I left for her will give you a key to my diagnosis, viz.: Creasote in one-tenth drop doses and arsenicum alb., although a careful examination of the abdominal viscera failed to find any tumor or swelling of any kind, neither any tenderness to pressure in any place except over the cœliac axis or plexus. She urged me while pressing over the stomach and bowels not to be afraid to use as much force as I wanted, as there was no pain resulting. The diarrhœa lasted but a day or two, and then the bowels moved naturally every, or every other day. About ten days after I left her to go away she became fearfully constipated. Dr. Trull was called, and as he attended the case thereafter until death terminated the suffering, he will give you the further report.

"One thing I often noticed. Beside her bed she had lying upon the floor a piece of paper, say ten or twelve inches square, and this would be covered with a thick, viscid, and sometimes frothy sputum. She did not *cough* it, for she had no cough; she did not *vomit* it, for, while under my care, she only vomited at the time mentioned above. She just seemed to 'spit' it as it came into her mouth. And for some reason she seemed remarkably shy in speaking about it. Taking your tabulated symptoms of diagnostic points, I will indicate what symptoms she had while I saw her professionally: Emaciation rather rapid, but not extreme; no tumor in epigastrium; severe pain in epigastrium, side, and back; stools described as natural; no sugar in urine (I mentioned that I tested for albumen, but found none); impaired appetite, disordered digestion; loathing of food; pain worse three or four hours after eating (marked); vomiting but the time mentioned. She had then anorexia, debility, emaciation, a flow of saliva-like fluid from the mouth, cœliac neuralgia; dull, heavy, aching pain deep down in the epigastric region, radiating or extending to the back and lumbar region, *relieved* by *rubbing* and assuming erect position or sitting up in bed; worse by paroxysms and at night; no jaundice, no thirst, no increase in temperature, a slightly increased pulse, a sallow, but not greenish-yellow complexion; urine and stools natural, so far as observed. These constitute the array of symptoms as far as I observed them. Their change Dr. Trull will notice. The family history revealed a cancerous diathesis. Some fourteen years ago she went to you in Rutland, and you removed a tumor from the back of her hand. Have you any recollection or record of its character? The large gall-stone which was found in the gall-bladder I send you by mail with this. Its weight was 3 iss. If you have no further use for it after examining and keeping it as long as you desire, will you kindly return it to me?

"I have thus hurriedly tried to give you the salient points in the case. If I have failed in any of them please interrogate me further. Hoping it will be satisfactory, however, I am, sincerely yours, E. L. Wyman."

Now, here was a woman, about sixty years of age to appearance, with a family history of cancer, with a cachectic look, pale, and rapidly emaciating, with more or less constant pain radiating from the epigastrium, having occasional vomiting and anorexia, and an increase of pain a few hours after eating, and a tumor at the epigastrium. Could there be a plainer case of cancer of the pylorus?

Yet the post-mortem examination showed it to be a case of primary cancer of the pancreas, with *dilatation of the stomach*, and one big non-faceted gall-stone in the gall-bladder.

These two cases are worthy of comment, for in the study of them I think we may find something to make the diagnosis of this confessedly undiagnosable disease possibly diagnosable.

Dr. Jenner says, in effect, no symptoms are pathognomonic of pancreatic disease. Dr. Wardell, in "Reynolds' System of Medicine," vol. iii., p. 428: "Da Costa has professed to diagnose cancer of the pancreas from its other maladies, but the truth is we have no just rules of observance to point out any real distinctions." Da Costa, in his "Medical Diagnosis," p. 605, says: "As regards cancer (of the pancreas) the most trustworthy symptoms are a tumor in the epigastric region, pain in the back, not increased by the taking of food, but usually augmented by the erect posture; progressive emaciation and debility; an appetite capricious rather than diminished, and, in some instances, indeed a ravenous desire for food; constipation at times, but far from invariably." It seems to me that the two cases of primary cancer of the pancreas above related point to a diagnostic rule of great value, so far as two cases can go toward making a rule. In the first case it is to be noticed that the little tumor could be felt almost all the while, and that at the times at which it could not be felt the stomach was distended by recently eaten food. What probably made it possible to feel the tumor at almost any time or any posture was her emaciation, and the small quantity of food in her stomach. The post-mortem examination, in disclosing the atrophy of her stomach, accounts for the fact that her cancer of the pancreas was so seldom overlaid by that viscus distended. In the second case the tumor was seldom felt during life. Indeed I don't think it was felt more than once. When it was felt she was *recumbent*, and had not been eating. The post-mortem in revealing a very considerable distention of the stomach, revealed the reason why, and how the cancer of the pancreas was aproned over most times during life.

Cancer of the pylorus sometimes appears and disappears; I saw one such a case a few years ago. A man, from Salem, N. Y., came to see me on account of a stomach trouble which had been pronounced cancer. On examination of him, as he lay on my operating-table, I could feel no tumor at the epigastrium, and I was inclined to doubt the diagnosis of his former attendant, whom I knew very well, and knew to be a practitioner of considerable ability. I bethought me to make the patient stand up. In an instant the pyloric tumor was there as plain as a pike-staff. I wrote to his attending physician and asked him to follow the case and get a post-mortem if he could. He did, and answered that the case was one of *cancer of the pylorus*, not of the pancreas. But it appears that the *erect* posture brought the pyloric tumor within the region of touch, and in doing so would not have uncovered, but rather hidden a pancreatic cancer.

Hence, in examining a suspected pyloric tumor, the fact that it cannot be felt in conditions which allow the stomach to get over it, and can be felt only when the stomach cannot get in front of it so as to apron it: or, in other words, if the suspected tumor can always be felt when the stomach is empty, but disappears whenever the stomach is distended, and if the tumor commonly is more obvious in the recumbent than in the erect posture, I feel quite confident we should be justified in making the diagnosis of pancreatic tumor even in the presence of some of the symptoms of stomach cancer, such as anorexia, pain after eating, or occasional bloodless vomits. Another diagnostic point which seems to me as of considerable value is the character of the pain as well as its persistence. In the first place, the pain is more continuous than in cancer of the pylorus. In the second place, the pain radiates in more directions than in cancer of the pylorus. In the third place, the pain is more dismal, more dolorous. It is a pain that seemingly has no ending. It is a disheartening pain. It does not become more endurable by having been endured. It is a pain which has no leaven of hope in it. It will be noticed in Mrs. H——'s case that there was pretty constant (for a time) spitting of a saliva-like fluid from the mouth. Frerichs attributes to this symptom considerable importance, but says, "We must be careful in considering such an increased salivary secretion as due to disease of the pancreas, for as yet there are no recorded cases of primary uncomplicated pancreas disease in which this symptom was definitely present" (Fried-

reich, in "Ziemssen's Cyclopædia," vol. viii., p. 567, to whom I must refer the reader for further consideration of the value of this symptom).

P.S.—The writer is not unaware of the extreme rarity of primary cancer of the pancreas. Dr. Putnam, of this place, saw the first case with me, and attended the post-mortem. The other case was witnessed by Drs. Trull, Wyman, and others, I think, at Factory Point, Vt.

JEQUIRITY OPHTHALMIA.[1]

By JOSEPH A. ANDREWS, M.D.,

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HAVING quite recently[2] considered, at some length, the subject of jequirity ophthalmia, I desire here to limit my remarks to a brief review of certain papers that have appeared on the subject in question since my own communication alluded to above was published.

First, is jequirity directly responsible for the disastrous results which have been placed on record as having followed its use?

Has it a constant and regular action, and are there any dangers to be apprehended from its employment, even according to the directions which I have indicated in my paper (loc. cit., p. 251)?

In order to answer the first question, it will be necessary to examine the evidence which has been adduced to show that jequirity is to blame for the mischief to the eye which has resulted during its use.

Jacobson[3] records a case in which jequirity produced purulent infiltration of the cornea, perforation of the latter, and exposure of the entire iris. This would certainly seem to be a grave reproach to the use of the remedy in question. In this particular case, the ophthalmia produced was certainly not true jequirity ophthalmia, and yet this circumstance would not be a sufficient defence of the remedy; but I am convinced that the real source of mischief is to be sought in the strength of the infusion and the manner in which it was employed, Jacobson having, namely, *instilled* the infusion (five per cent.) into the conjunctival sac, and kept up the action of the drug with compresses wet with the infusion. This was following Dr. de Wecker's first instructions regarding the use of jequirity to the letter; and that Dr. de Wecker obtained uniformly favorable results before he had modified his manner of applying the drug, is certainly very remarkable and providential. But in Dr. Knapp's two cases,[4] although true jequirity ophthalmia was not produced, a violent pyorrhœa having followed the use of the infusion, and affected the other not inoculated eye, nevertheless this case is a most instructive one. Dr. Knapp treated the two cases in question according to Dr. de Wecker's last directions, making a single brushing of a fresh three per cent. solution, macerated for three hours, over the entire upper lid; and yet this single application was followed by violent reaction and perforation of the cornea. If it be possible with jequirity to produce a purulent ophthalmia, then we cannot defend the remedy in a given case in which it has produced mischief by the substitution of a purulent for a genuine jequirity ophthalmia. Nevertheless, I confidently believe that the dangers to be apprehended from the drug may, in a very marked degree, be avoided by observing the strictest caution in its use. The facts which should be seriously borne in mind are, that all eyes are not affected in the same degree by the remedy, a three per cent. infusion in one instance being followed by violent reaction, while in others a stronger infusion may give rise only to slight reaction. Therefore I believe that the safest plan to observe is to begin with a weak solution, say two per cent., even where there is pannus, and one per cent. when the cornea is not involved, and keep in mind the fact that there is a period of incubation which may exceed twenty-four hours. *The berries should be husked, crushed, and macerated for about six hours in cold distilled water, then filtered;* and after a single thorough brushing of the palpebral conjunctiva with cotton wrapped about the end of a match. *Thirty hours are allowed to elapse before* renewing the brushing; then, according to the susceptibility of the patient to the action of the remedy, we may repeat one, two, or three times daily, always proceeding with caution, and *never keep up the action of the drug with compresses wet in the infusion.* By following these directions I have never yet seen an untoward result, and I have used the remedy in one hundred and forty cases of diseases of the cornea and conjunctiva.

Pre-existing purulence is a positive contra-indication to the use of jequirity. Papillary hypertrophy of the conjunctiva is not favorably influenced by the remedy. Hippel says, the more hyperæmic the conjunctiva is, the more intense will be the reaction. De Wecker says this is an error; but from my own observations I feel disposed to believe that Hippel's statement is, in a measure, correct. However, this much is true; the nearer the conjunctiva approaches a normal physiological condition, the more certain and intense will be the impression produced by the infusion. The most violent reaction I have seen follow the use of an infusion of jequirity occurred in a case of sclerosis of the cornea, in which the conjunctiva, for all practical purposes, was normal. But the patient in this instance took upon herself the responsibility of departing from my instructions, and instead of a single application, and awaiting the lapse of the number of hours indicated, she *poured* the infusion (three per cent., cold, macerated for six hours) into the eye four times during the day. The result was a most intense chemosis and swelling of the lids and corresponding side of the face, and nasal mucous membrane; and in the region of the frontal sinus the pain was so violent that the patient declared that she did not sleep for three nights; and I am convinced that her suffering must have been very acute.

With violent inflammatory reaction there was extensive formation of a croupo-diphtheroid membrane, and a resulting symblepharon, and what is most instructive for us to remember is the circumstance that it was a case of genuine jequirity ophthalmia, no purulence having occurred at any time in the course of the inflammation. And yet the vision was improved from an ability to perceive light, to counting fingers at fifteen feet.

Dr. de Wecker says,[5] "without any doubt, the cornea is not exposed to any danger" in jequirity ophthalmia. But the first case in which I employed the remedy taught me that this was a most pernicious error, and that the cornea is endangered. However, if we compare the number of authors who have declared themselves for and against the jequirity treatment, we find that the former are conspicuously predominant, and it would seem that those authors who do not favor the remedy, such as Vossius, Galezowski, and Nicolini, might change their views if their experience were extended to a larger number of selected cases.

Scrofulous pannus and sclerosis of the cornea are favorably influenced by jequirity, and I have had very gratifying results in this class of cases in improving the vision; but I have never used the remedy, as Dr. Wecker has, in torpid ulcers of the cornea, firstly, because I could not satisfy myself that the cornea was not placed in still greater danger by its use; and secondly, I felt that I could rely on safer and really more satisfactory means. However, of course, mere conjecture should not be permitted to weigh against the results of experience, and Dr. de Wecker's experience seems to speak in favor of the remedy in this class of cases.

40 WEST TWENTY-FOURTH STREET.

[1] Read before the American Ophthalmological Society, 1884.

[2] Trachoma and the Etiology of Jequirity Ophthalmia. Archives of Medicine, vol. xi., No. 3, pp. 221–261, June, 1884.

[3] Berliner klinische Wochenschrift No. 17, April 28, 1884, p. 258.

[4] Archives of Ophthalmology, vol. xiii., No. 1.

[5] Graefe's Archiv für Oph., Bd. xxx., A. i., p. 267.

Progress of Medical Science.

New Treatment of Strangulated Hæmorrhoids.—Dr. Monod advises a new treatment for strangulated hæmorrhoids, which he has practised with great success. It consists in forcibly dilating the anus, as in case of fissure. Verneuil had already recommended this method for the cure of simple piles, and has been followed by most of the young surgeons, who have entirely abandoned every other treatment. To effect the dilatation Verneuil employed specula of different dimensions, and only in the case, as has been just stated, of the ordinary condition of hæmorrhoids. On the contrary, he says that "when the piles are the seat of sphacelus he always waited until the complication disappeared." Monod, who has imitated Verneuil with the best results in those simple cases, goes still farther, and instead of regarding strangulation as a counter-indication to the operation, considers that his fact renders it the more necessary. He cites a case n point. He was called by one of his *confrères* to see a gentleman who had been suffering excruciating agony for two days from strangulated piles, and on whom ice fomentations, narcotics *intus* and *extra* were tried without effect. Local examination showed no more than is ordinary in such cases—a ring of tumefied external hæmorrhoids surrounding a packet of internal turgescent hæmorrhoids, with a dark spot in the centre, announcing the commencement of sphacelus. The least touch was painful, and the patient demanded relief at any price. Partisan of the treatment of hæmorrhoids in general by dilatation, he thought that he would be doing right in employing it in the present case, knowing that by suppressing the action of the sphincter the pain would cease. Accordingly, the patient was put under the influence of chloroform, and the hemorrhoidal tumors reduced, and then Monod largely dilated the anus with his fingers. A few minutes afterward the patient awoke free from all pain, and in a few days he had the satisfaction of not only feeling that the strangulation had entirely disappeared, but that he was for ever quit of his piles. This case of Monod's proves that the hand dilates just as well as the speculum, and consequently the operation is reduced to its simplest expression.—*Medical Press*, September 24, 1884.

Naphthaline in Diarrhœa and Cystitis.—For the last three years Professor Rossbach, of Jena, has employed naphthaline in all the cases of diarrhœa that have come under his care. He concludes that it is of great service in all cases of chronic intestinal catarrh, with or without ulceration, attended by chronic diarrhœa, and in all cases the stools in the course of from five to fifteen days become of normal frequency and consistence. Some of the naphthaline given passes over into the urine, and the effect in the case of urinary troubles was noted to be exceedingly favorable. Pus, blood, and vibriones quickly disappeared from the urine after its administration. It was given in doses of thirty to forty-five grains per day. After half a grain daily the appetite was often improved. —*The Medical Press*, October 15, 1884.

Migraine and Tabes.—Among the various prodromal symptoms of tabes dorsalis, attention was drawn by Duchenne, and later by Pierret, to the occurrence of neuralgic seizures closely simulating hemicrania. The recent brochure of Berger mentioned this fact as a novel observation. Dr. H. Oppenheim, of the Berlin Charité, points out (*Berl. Klin. Wochenschr.*, No. 38, 1884) the priority of the French authors, and supplies some interesting details of twelve cases, from a total of eighty-five tabetics, who either were at the time of observation or had previously been subject to migraine, ten of the patients being females. The study of these cases leads him to conclude that hemicrania is far too frequent a feature in the history of tabes dorsalis to be considered an accidental event, and that it is far more common among tabetic women—*e.g.*, ten times in thirty-two cases—than among men. The relations which the hemicrania bears to tabes are various. Generally it has been present many years before the initial symptoms of tabes, and the hemicranial attacks increase in frequency, intensity, and duration as the disease advances. Or the migraine may coincide with the onset of declared tabetic symptoms, or be associated with vomiting and gastric crises. In rare cases the hemicrania does not appear until tabes is developed. On these grounds, Oppenheim thinks it the duty of the physician, especially in migraine of increasing severity, to be on the alert for the recognized early symptoms of tabes—especially the absence of knee-jerk.

Tonsillotomy.—Dr. de Saint-Germain, believes that the tonsillitome of Velpeau, also of Luer, are very unsatisfactory instruments, and better not used. The operation is frequently incomplete, and the tonsils are often left untouched. The best method is removal by means of a straight bistoury. The tonsils should be held firm in a pair of forceps. An incision made close to the edges of the instrument by means of a bistoury removes the entire tonsil without any danger of injuring either the palate or the pillars. When the right tonsil is removed, the left hand must perform the operation, which is decidedly inconvenient. Amygdalotomy thus performed on children is never followed by accidents, nor by hemorrhage of an alarming nature. The author mentions instances where excision of the tonsils among adults provoked hemorrhage, which resulted in the death of the patient. In young girls, fourteen or fifteen years of age, who have not menstruated, the tonsils ought not to be removed; the hypertrophy frequently disappears after the menses appear. Dr. de Saint-Germain affirms that the tonsils ought not to be removed, unless by their size they impede free breathing.

The Symptomatic Treatment of Typhoid Fever. —Professor Ebstein read a paper on "The Treatment of Typhoid Fever," at the recent meeting of the German Scientific Association, at Magdeburg. He gave his experience for the past seven and a half years, at the Clinic, in Holstein. The number of cases treated was 235. The mortality was only 5.5 per cent., reduced to 2.5 per cent. by the exclusion of inevitably fatal cases. The author concludes that the so-called "abortive treatment" with calomel is useful and to be recommended. In the absence of any causal treatment, this can only be symptomatic, *i.e.*, measures based on a consideration of the morbid phenomena and individual conditions. Above all, attention must be paid to judicious dietetic treatment and the maintenance of the nutrition of the patient. The control of high temperatures, even if of long duration, is only called for when they are associated with severe cardiac or nerve symptoms, or when the temperature attains such a height as to threaten life. The principles of treatment enunciated are, says Ebstein, far more satisfactory in practice and in their results than an exclusive adoption of "bath treatment," or other methods of strict antipyresis. Baths he regards as of value for their powerful stimulant action, and he would employ them where other methods seem to be insufficient.—*London Lancet*, October 18, 1884.

The Germ-Theory of Malaria.—In a paper read by Dr. Hart, of Arkansas, before the Medical Society of his State (*Gaillard's Medical Journal*, September, 1884), he asks some rather pertinent questions of the believers in the bacillus malariæ. He wishes to be enlightened on the following points: 1. How does the bacillus malariæ generate, thrive, and prosper under such diverse circumstances and surroundings? 2. How can it manifest itself in such diversified effects, and produce so many different diseases? 3. Will not the same pathogenetic cause always produce the same disease as its effect? 4. Will different bacilli produce the same diseases? 5. It will not do to invoke the aid of any other bacillus to do the work of the malarial bacillus, though the existence of

fifty or a thousand others be proven. 6. If there be a bacillus malariæ, and quinine be its destroyer or germicide, why is it not equally effective and potent in all diseases produced by it? 7. To determine the existence of a malarial bacillus three propositions must be proven and established: First, it must be discovered; second, it must be cultivated; third, it must be capable of being reproduced. 8. The existence of a germ determined and established as above, three propositions must be proven to establish its causative relation to malarial disease: First, that it will always produce the same disease and nothing besides; second, that nothing else will produce it; third, that malarial disease will always be produced by it and nothing else. The above propositions, he concludes, must be proven to a demonstration to establish the existence and causative relation of germs to malarial disease, and without this proof palmella spores and algæ, and pyrogen and pigmentary elements, and all the bacillus twaddle of germ theorists, amounts to nought, and is but fit rubbish for the waste-basket.

The Removal of Tattoo Marks.—India-ink markings in the skin are often the source of much annoyance in after life to those who have been tattooed in youth. The editor of the *Medical Press* states that nothing but the knife or an active escharotic will produce a satisfactory result. He holds that the cutis must be destroyed. Dr. Neale, of London, however, claims that he has secured good results with sodii ethylas, first suggested by Dr. B. W. Richardson. He cites the case of a gentleman who, in his younger days, had a palm tree tattooed on his arm and an elaborate bracelet on his wrist, who has quite lost all the dark matter, etc., the skin being left in many places quite natural, although, of course, there is still more or less of a scar, but this diminishes month by month.

Resorption of a Pleuritic Effusion following Erysipelas of the Chest.—Dr. M. Schmidt relates the case of a strong man, fifty-five years of age, who was admitted to hospital suffering from pleurisy with effusion. He was treated by poultices to the chest and opium internally, and subsequently by the application of a large blister. No improvement followed, but about a week later the temperature suddenly ran up and an erysipelas began, starting from the wound of the blister, and soon spreading to the entire surface of the chest both front and back. Four days subsequently it was found that the effusion had almost entirely disappeared. The erysipelas attacked the head but finally yielded and the patient made a good recovery. The author does not advocate Fehleysen's practice of inoculating the patient with erysipelas in order to promote absorption of the fluid, as one death has been thus caused. But he thinks that by means of Pasteur's method of culture and attenuation it might be possible to obtain a modified virus which could be inoculated with entire safety.—*L'Union Médicale*, September 25, 1884.

Ephemeral Rheumatismal Periostitis.—At the recent meeting of the French Association for the Advancement of Science at Blois (*L'Union Médicale*, No. 133, 1884), Professor Verneuil read a paper on an affection not hitherto described in the text-books, but of which he had observed two examples. The disease presents under the form of a tumefaction, hard at first, but becoming elastic and soft after a certain time. At one period the sense of fluctuation was so marked that it was thought that pus was present, but the fluctuation disappeared and the swelling gradually subsided. There was no hyperplasia as in ordinary surgical periostitis, no fever, and no discoloration of the skin. At certain points the swelling disappeared spontaneously, at others it at first diminished and then increased again in size. There was in the latter case a very appreciable congestive element, for one of the patients having taken cold, a tumor situated on his face increased suddenly to twice its former volume. There was no previous history of syphilis, but the patients had repeatedly had rheumatism. As usually happens when cases are related of previously undescribed conditions, many of the members present had seen similar cases, and they related the histories of their several patients, which agreed in general with those described by the author of the paper. Professor Verneuil proposed to call the affection ephemeral rheumatismal periostitis.

Palliation of Epilepsy by Apomorphia.—It is stated in the *Revue Médicale* of September 20, 1884, that a German physician has succeeded in cutting short epileptic attacks by subcutaneous injections of muriate of apomorphia. He injected three or four drops of a one per cent. solution. The patients experienced some nausea but there was no vomiting. Whenever the injection was made during the aura the impending convulsion was nearly or entirely averted, and the more prolonged the aura usually was, the more pronounced was the success of the injections.

Decoction of Valerian in the Treatment of Contusions.—Upon the suggestion of Dr. Grehant, Dr. Aragon has made a number of trials to determine the value of a decoction of valerian root as a dressing for wounds, and especially for contused wounds. The decoction used was of the strength of thirty grammes of valerian root to one litre of water. The cure was no more rapid than that which obtains with other dressings, but from the first application the pain was completely abolished. This is a point of considerable importance if it should prove to be sustained in further trials.—*Lyon Médical*, September 21, 1884.

Treatment of Elephantiasis by Electricity.—Dr. Vicira de Mello has recently published a monograph on this affection, based upon the study of upward of one hundred and fifty cases. He shows that the causes capable of producing lymphangitis are also the causes of elephantiasis, since the latter is developed in consequence of successive attacks of lymphangitis. This accounts also for the comparative frequency of the affection in warm countries where the causes of external irritation are so numerous. During the attacks of lymphangitis the lymph transudes into the subcutaneous tissues, and is not there absorbed. The surrounding parts are chronically inflamed, proliferation takes place, and after several successive attacks of this nature the elephantiasis becomes established. Death from elephantiasis is of very exceptional occurrence, due to abscess or some other complication. The author has never observed the termination by gangrene, as is mentioned by some pathologists. The attacks of lymphangitis are usually treated by the administration of quinine in large doses, purgatives, and locally by antiseptic applications. But Dr. de Mello asserts that the only method of treatment which has given any satisfaction in elephantiasis is that by electricity. He has employed both galvanic and faradic electricity with excellent results, and in this his experience is in accord with that of Drs. Silva Aranjo and Moncorve.—*Journal de Médicine de Paris*, October 4, 1884.

How to Shrink Hypertrophied Tonsils by Caustic Applications.—Among the various caustics for local use in causing shrinkage of tonsillar hypertrophies, Dr. Chisholm (*Virginia Medical Monthly*) has found the chloride of zinc the most available and the least annoying to the patient. He employs it in the following manner: A wire, the size of a fine knitting-needle, is roughened for a half inch from one end, so that it may hold a fibre of absorbent cotton twisted upon it. Dip this into a saturated solution of chloride of zinc, and thrust it to the very bottom of the crypt, and keep it there several seconds. When withdrawn the whitened orifice marks the cauterization. By renewing the cotton for each follicle, several may be thoroughly cauterized at the same sitting, without causing any annoying irritation to the throat. A very few applications will cause the gland to shrink, as will be seen one week after the destructive cauterization has been made to the interior of the follicles.

Explosive Drugs.—Several instances are related in the *Deutsche Medicinal-Zeitung* of September 29, 1884, of injuries resulting from the explosion of compounds ordered in physicians' prescriptions. A gargle was ordered of chlorate of potassium, chloride of iron, and glycerine. It was prepared, and five minutes later the bottle exploded in the purchaser's pocket, wounding him quite severely with the fragments of glass. A mixture of hypophosphite of lime, chlorate of potassium, and lactate of iron exploded and nearly killed the prescription clerk who was componnding it. Even the simple trituration of calcium hypophosphite is dangerous; a young pharmaceutist was killed by an explosion which was caused by the shaking of a solution of this substance. Physicians not infrequently order a solution of chromic acid in glycerine. But when the acid is added quickly and all at once to the glycerine a readily explosive substance like nitro-glycerine is formed. Chlorate of potassium when mixed with tannin or muriate of morphia often explodes. The combination of iodide and preparations of ammonia must be made cautiously, as iodide of nitrogen is formed, which explodes on the slightest touch. Indeed one ought to be very careful in ordering and compounding mixtures in which easily reducible substances enter—such as the chlorates, the hypophosphites, the nitrates, preparations of iodine or ammonia, chromic acid, glycerine, permanganate of potash, etc. If physicians would but remember the danger of explosions in preparing such compounds, they would less often put the lives of druggists and of their own patients in jeopardy.

The Antipyretic Action of the Alkaloids of Quebracho.—At the recent meeting of the French Association for the Advancement of Science at Blois, a paper was presented by Drs. Huchard and Eloy on this subject (*Le Progrès Médical*, October 4, 1884). There are many alkaloids of this drug, no less than six having been already isolated. Numerous experiments upon rabbits having demonstrated the antipyretic action of these alkaloids, the authors were led to make trial of them in the human subject. In a certain number of patients with typhoid fever, to whom quinine had been given without effect, a notable reduction of temperature was obtained by the hypodermic injection of the muriate of aspidospermine in doses of one and a half to three grains. This latter amount should never be exceeded. The authors noted especially the rapid reduction of temperature following the exhibition of these several alkaloids, and also remarked upon the changes occurring in the blood after their administration. The blood is changed in color in a way very similar to what occurs after poisoning by carbonic oxide.

Paralysis Caused by the Use of Crutches.—Dr. Vinay reports the case of a man, sixty-three years of age, who suffered from paralysis of the extensors of the forearms and of the long supinators following upon the use of crutches. The crutches were of very rude construction and had no supports for the hands. All the affected muscles, with the exception of the right triceps, reacted to the faradic current. A treatment by means of sulphur baths and electricity was instituted, and at the end of a month all the muscles were restored to their normal function, except the right triceps. The use of the poorly made crutches was, of course, abandoned. The author believes that paralysis of the triceps from this cause is of much more frequent occurrence than is generally supposed. He advises a treatment of this condition by the faradic current, friction, and sulphur baths, and removal of the exciting cause.—*Deutsche Medicinal Zeitung*, No. 77, 1884.

Syphilitic Arteritis.—At the meeting at Blois of the French Association for the Advancement of Science, Dr. Leudet related a case of syphilitic arteritis, accompanied by cerebral symptoms, occurring four years after the appearance of the initial sore. The superficial temporal arteries of both sides became cord-like, and the pulsations ceased in them. The cerebral symptoms, pain and loss of memory, occurring at the same time indicated a concomitant lesion of the brain. Under the influence of iodide of potassium all these troubles subsided, the arteries lost their indurated feel, the pulsations returned, and the cerebral symptoms gradually passed away. The author thought this case was important as showing the curability both of syphilitic arteritis and of cerebral syphilis.—*Lyon Médical*, October 5, 1884.

Biliary Calculus Passed by the Rectum.—Drs. Secrétan and Largmer relate the case of a man who suffered from frequent attacks of hepatic colic. These attacks ceased for the time after the expulsion of a lumbricoid worm by the mouth. But they soon recurred, and were accompanied by violent nervous crises, acute mania, left hemiplegia, and loss of the intellectual faculties, especially of the memory. Three months later these nervous symptoms suddenly ceased upon the expulsion by the anus of a large biliary calculus, nearly three inches in length by an inch and a half in thickness. The patient had never presented any symptoms of intestinal obstruction, and the reporters believed that a fistula had been established between the gall-bladder and the colon.—*Revue de Chirurgie*, October 10, 1884.

The Mechanism of Rotation of the Forearm.—Heiberg is of the opinion that in rotation of the hand the radius does not simply turn around the ulna, but that both radius and ulna rotate around an axis lying between the two. Dr. v. Meyer agrees with Heiberg that this may occur in certain cases, but regards it as occurring only exceptionally, and in cases in which the ligaments of the elbow are stretched to a very considerable extent. He concludes, therefore, that this rotatory movement of the ulna is not normal but is due to a partial subluxation. —*Centralblatt für Chirurgie*, No. 38, 1884.

A Prepuce Dilator for the Treatment of Phimosis without Operation.—Dr. Richmond writes in the *Medical Press*, October 1, 1884, concerning a new instrument which he has devised for the treatment of phimosis by gradual stretching. He says that the only method of treating phimosis, in common practice, is by operation. There are, however, a great many patients suffering from this malady who absolutely refuse to undergo any operation for its relief. Numbers of cases are constantly presenting themselves of men considerably advanced in years who have never been able to get their foreskins back, and have consequently suffered continually from discharges attributable solely to the irritation attendant on this condition. Yet many such patients will rather pass their lives with the inconvenience and risk which this state of things involves than submit to the knife. There can, however, be only one other possible means of treating phimosis, and that is by stretching the prepuce. But this method appears to be very seldom put into practice, for when it is tried it generally results in failure. I can see no reason, however, why the skin and mucous membrane surrounding the glans penis should not be as freely dilatable as in other parts of the body. The reason of the failure, I take it, is simply that no proper instrument has been invented for the purpose. Extemporized instruments, such as dressing forceps, aneurism needles, or blunted hooks, are painful and inadequate dilators. An instrument proper for the purpose should possess blades which could be introduced separately; the blades must be of suitable size and shape to suit the case; and it should be possible to open them parallel to one another or at any angle. The instrument which I have devised for the purpose consists of two rods, connected together by means of two long screws. At one extremity they are bent inward, and fixed to two blades. These blades can be removed, and may be of any size and shape. The rod is of tuning-fork shape, with a screw-nut sliding in the groove between the two branches of the fork. Through the nut is passed a long screw, the end

of which is received into a cup working on a hinge-joint attached to a cylinder, which slides along the bar. The screw-end may be detached from the socket by depressing a little spring. The blades are passed separately down between the foreskin and glans. Very small blades are used at first, and they are, of course, previously oiled to facilitate their passage. They are then attached to the rods, which are united by fixing the end of the screw into the cup-joint. Gradual extension can then be applied by turning the nuts. Since there is a joint at the cylinder, the blades may be opened parallel to one another or at any angle, and, in fact, the relative position of the blades may be altered in any direction. The idea is not to stretch the foreskin forcibly and at one sitting, but to dilate it gradually in the same manner as a stricture of the urethra is dilated, by repeatedly passing a catheter. If the instrument be used once or twice a week for about ten minutes at a time, the foreskin will in most cases go back in a month or six weeks. The larger blades are used to thoroughly stretch the tissues and complete the treatment. The foreskin may thus be dilated to any reasonable extent, and will, after a time, easily roll back over the corona. The instruments are made by Messrs. Arnold & Sons, of Smithfield, England.

An Autodidactic View of Diabetes.—In the *Gazette des Hôpitaux*, a physician has published a confrère's autobiography in so far as it relates to the careful observations of his own case, which was one of pronounced diabetes mellitus. The physician in question, having kept an eye on himself for many years, finally decided that glycosuria was a symptom of active and chronic hepatic congestion dependent upon gout. Like the latter, it should be treated by regulating the diet and not by the exhibition of useless drugs. He believes in white meat, eggs ,fish, chicory, spinach, artichokes, and lettuce. Absolute abstention from fruits, sweets, farinaceous foods, as well as coffee and all alcoholic beverages, is insisted upon.

Peritonitis Resulting from Diseases of the Vermiform Appendix.—Professor With, dealing with this subject before the International Medical Congress, said that the inflammation of the right iliac fossa, known by the name of perityphlitis, very often began in ulceration and perforation of the vermiform appendix. Peritonitis of this origin was called appendicular peritonitis, and was met with under three forms or conditions, generally well marked; as adhesive appendicular peritonitis (before perforation), and appendicular peritonitis, local or general (after perforation). As regarded treatment, the chief indication was to give the intestinal canal as complete rest as possible. To this end, sufficiently large doses of opium and morphia should be used, as well as complete abstention from laxatives and enematas, kept up for a period of twenty-four hours, if that were thought necessary. By means of this treatment, the indication for surgical interference underwent a considerable restriction.

Aseptol.—A phenol compound, termed orthoxyphenylsulphurous acid, has been recently introduced into therapeutics under the name of "aseptol," this title having been given to it on account of its remarkable germicide qualities, which excel those of carbolic and salicylic acids. Aseptol is an amber-colored fluid, of a density of 1,400; it has a slight odor, but is more pleasant to the smell and is less poisonous than carbolic acid. Last November, Drs. Leroy and Van den Shrieck, of Antwerp, studied the therapeutic applications of aseptol, and reported most satisfactory results as an antiseptic. It has the following advantages over antiseptics in common use: 1. It is very soluble in water. 2. It is very slightly caustic. 3. It is free from irritative qualities, and may be applied for a long time to the skin, the eyes, the bladder, etc. 4. Finally, its slight toxicity, which permits its use internally in considerable doses, and also the application of concentrated solutions in diphtheritic pharyngitis and laryngitis.—*La France Médicale.*

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending November 22, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
November 15, 1884.....	0	33	55	5	107	72	0	0
November 22, 1884.....	0	29	54	6	115	55	0	1
Deaths.								
November 15, 1884.....	0	10	8	4	15	40	0	0
November 22, 1884.....	0	9	15	6	14	28	0	1

Bell's Law Discovered by Magendie.—Professor Chapman says the credit of demonstrating the functions of the anterior and posterior roots of the spinal nerves belongs to Magendie, and not to Sir Charles Bell. When Magendie, in 1821, published the correct idea, Bell collected and destroyed, as he thought, the whole edition of his own pamphlet, printed in 1811, which advanced the idea that the posterior roots are trophic only, and quickly published another containing the true idea. Professor Chapman has seen a copy of Bell's treatise of 1811 which escaped destruction, and is now owned by the celebrated Richard Owen.

Gonorrhœa and Chordee.—Troublesome gonorhœal cases do not fail to occur except in the experience of those who are in the possession of unfailing remedies. A retired army surgeon, without apparently expecting such good results, ordered for an officer, some fifteen years ago, who was just about to present himself for duty, but who was suffering from gonorrhœa associated with an intense chordee at night, the following two preparations: aquæ, ʒ vij., mucilago acaciæ, ʒ j., ext. belladonnæ, gr. xx., and zinci sulph., gr. xx. A teaspoonful injected frequently. The other is an external application consisting of unguenti spermaceti ʒ iv., unguenti hydrarg., ʒ iv., ext. belladonnæ, gr. x., ext. opii, gr. x., to be smeared freely along the perineum and around the crura penis at night. "Complete cure" occurred within a week. The following injection for gonorrhœa is also recommended. It is claimed to be superior to any other single injection: ℞. Pulv. iodoform, 20; acidi carbolici, 10; glycerini, 80; aquæ destillatæ, 200.

Heart Beats.—Dr. N. B. Richardson, of London, says he was recently able to convey a considerable amount of conviction to an intelligent scholar by a simple experiment. The scholar was singing the praises of the "ruddy bumper," and saying he could not get through the day without it, when Dr. Richardson said to him: "'Will you be good enough to feel my pulse as I stand here?' He did so. I said, 'Count it carefully; what does it say?' 'Your pulse says 74.' I then sat down in a chair, and asked him to count it again. He did so, and said, 'Your pulse has gone down to 70.' I then lay down on the lounge, and said: 'Will you take it again?' He replied: 'Why, it is only 64; what an extraordinary thing!' I then said: 'When you lie down at night, that is the way nature gives your heart rest. You know nothing about it, but that beating organ is resting to that extent; and if you reckon it up it is a great deal of rest, because in lying down the heart is doing ten strokes less a minute. Multiply that by sixty, and it is six hundred; multiply it by eight hours, and within a fraction it is five thousand strokes different; and as the heart is throwing six ounces of blood at every

stroke, it makes a difference of thirty thousand ounces of lifting during the night. When I lie down at night without any alcohol, that is the rest my heart gets. But when you take your wine or grog you do not allow that rest, for the influence of alcohol is to increase the number of strokes, and instead of getting this rest, you put on something like fifteen thousand extra strokes, and the result is you rise up very seedy and unfit for the next day's work till you have taken a little more of the "ruddy bumper," which you say is the soul of man below.'"—*Gaillard's Journal.*

THE TREATMENT OF STAMMERING.—A correspondent in the *London Lancet* of September 27th writes that anyone may be cured of stammering by simply making an audible note in expiration before each word. Stammerers can sing as easily as other persons. Jacky Broster, of Chester, who made a large fortune by curing stammering, simply made his pupils say *h e r* before each word beginning with a consonant.

THE PECUNIARY VALUE OF ENTEROTOMY.—Dr. Sutton, of Pittsburg, having performed enterotomy on the wife of a wealthy resident of that city, removing four inches of intestine, was encouraged, by the fact of her complete recovery, to send in a bill of $1,000 for the operation and twenty-two days of attendance in the after-treatment. Each member of the jury, who finally adjudicated the matter, wrote on a slip what he thought would be a proper fee, and the sum total of the amounts thus voted, divided by twelve, was agreed upon as the verdict. The dividend was $330. One of the jurors thought about $10 would be a fair price, and another was willing to allow $30.—*Age.*

LATA OR MIRYACHIT.—In Java, according to the *British Medical Journal*, miryachit is known by the name of lata. The person affected with it is compelled to imitate everything he sees or hears. Our contemporary mentions an amusing case in which an Irish butler who was familiar with the symptoms of the disease took advantage of his knowledge to secure a glass of much-coveted wine: A doctor dined with a friend, with whom he discussed the peculiarities of the disease. The host pushed forward a bottle with the request to "try that, doctor; it's ten years old." The doctor took a stiff glass, and, smacking his lips, pronounced it "tip-top." Suddenly Barney, who had been present during the conversation, seized a glass and, filling it to the brim, drank it off, smacked his lips and pronounced it "tip-top." "Confound you," shouted the infuriated host, "what do you mean, sir?" "Shure, sir," demurely replied Barney, "oi'm afeard oi'm afflicted wid the latha."

REGULATORY ALBUMINURIA.—Rosenbach defines regulatory albuminuria as an albuminuria in which the quantity and quality of the urine are normal (except in containing albumen), and in which there are present no products of inflammation, such as tube-casts or blood-corpuscles. In such cases the kidneys are for the time functionating more than they normally do, and the albuminuria arises from anomalies of the blood or of tissue-change, and not from any disease of the kidneys themselves. It is to be remembered that in these cases the blood may be either absolutely or relatively richer in albumen than is normally the case. In the first of these cases the blood holds absolutely more albumen in solution than normal, and this may be due to a great absorption of albuminates from the food, to the transfusion of blood, or to peptonuria and the absorption of large pus collections. In the second case, the blood contains relatively more albumen than normal—relatively, that is, to its power of combining albumen—and this arises from increased loss of water through the skin or intestine, from diminished supply of water to the system, or from diminished functionating power in the white blood-corpuscles. In both these cases the excretory organs strive to reduce the albuminous concentration of the blood to the normal level, and hence the regulatory albuminuria. Rosenbach holds that the only characteristics of nephritis in its strictest sense are white (and the so-called "fatty") blood-corpuscles, and the tube-casts which are formed out of these corpuscles. He holds the hyaline corpuscles only as an indication of the presence of albumen, since, as is well known, they often occur when there can be no question of renal lesion. The red blood-corpuscles are only indications that the process possesses considerable acuteness.—*Zeitschrift für Klinische Medizin.*

THE MILK OF PREGNANT COWS UNFIT FOR INFANTS.—Dr. Ernest Mammen, of Bloomington, Ill., expresses an opinion below which is important if true, but which will be received with some incredulity. He says: "I have read with much interest the articles by Drs. Binnie and Vidal in recent issues of THE RECORD (September 13th and October 25th), and I heartily agree with these writers in their advocacy of cow's milk, fresh and pure, as the best substitute for mother's milk. But there is one factor which, in my experience, is often productive of harm that neither of them has mentioned. *The milk of the pregnant cow is unfit for consumption by the human infant.* This fact is too often overlooked, when by careful investigation the disturbance of stomach and bowels in cases of infantile diarrhœa could be traced to the use of milk. Where mixed milk is used the danger is that a proportion of it comes from pregnant cows. All hygienic care of the animals cannot make up for this condition of the milk, neither can the addition of sod. bicarb., common salt, lime-water, etc., destroy the deleterious principle, therefore my rule is to avoid it. I have recently had under personal observation a child weaned at six weeks, and put upon cow's milk. A good healthy animal was selected, and her milk, with the proper dilution and additions, agreed perfectly for three months, and that, too, during the summer. At the end of this time the cow was found with calf, and the infant's digestion was immediately disturbed. An obstinate diarrhœa set in, which could not be controlled until another cow, not pregnant, was substituted, when the child recovered and digestion was restored. I could cite other similiar instances, but the above illustrates the importance of this matter."

OZONE IN THE TREATMENT OF RHEUMATISM.—Dr. E. Brémond Fils has devised an apparatus for the application of vapor-baths of turpentine in cases of rheumatism, vesical troubles, lithiasis, etc. Ozone is evolved in the process, and is believed to be the active curative agent.

THE CHLOROFORM TREATMENT OF TAPEWORM.—We have received several communications upon the above subject. Dr. John H. Thompson, of this city writes: "Chloroform is *not* a dangerous remedy for tapeworm if properly used, but where any one gives a dose six times as large as necessary of a deadly drug then it may become dangerous. I have thirteen feet of tænia solium, with the head, that came from a patient March 27, 1870, after having suffered with it for fifteen years, and been to London and Paris to be treated for it. I, too, had tried pumpkin seeds, filix mas, and some other remedies, but succeeded with: ℞. Chloroformi, ʒj.; simple syrup, ℥j. M. One-third given at 7, 9, and 11 o'clock, followed at 12 o'clock by ol. ricini, ℥j., and the worm came at 1.30 P.M. from the happiest man I almost ever saw. I had caused my patient to fast absolutely for the twenty-four hours previous to taking my prescription, except allowing him to chew slippery elm bark. I have used the remedy in the same manner since with success." Dr. F. H. Enders, of Wailuku, Sandwich Islands, writes: "I have treated five cases of tapeworm at the Malulani Hospital successfully with the following: ℞. Chloroform, fl. ext., filix mas, ää ʒj.; emuls. ol. ricini, ℥iij. M. To be taken in the early morning. No food allowed until thorough action of the bowels. The entire worm was brought away in each case, with no unpleasant results." Dr. Charles H. French, of Waterbury, Conn., writes that he succeeded with the following: ℞. Olei tiglii, gtt. j.; chloroform, ʒj.; syr. glycyrrhiza, ℥j. M.

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KOCH'S DEFENCE OF THE CHOLERA BACILLUS.

SOON after the announcement by Koch of his discovery of the specific microbe of Asiatic cholera, the now well-known comma-bacillus, there appeared in the medical press various doubts concerning the diagnostic importance of this newly fledged organism. We have kept our readers amply informed in regard to the various criticisms offered, as well as the protests made, against the acceptance of Koch's conclusions.

In the *Deutsche Medizinische Wochenschrift* of November 6, 1884, the distinguished German bacteriologist has just published a comprehensive reply to his critics. The most profound scepticism can hardly hold out longer against the new evidence adduced by Koch in support of his former claims, touching the relation of the comma-bacillus to Asiatic cholera.

Dr. E. C. Wendt, of this city, in an article published on page 589 of the present number of THE MEDICAL RECORD, alludes to these later investigations, and infers therefrom the necessity of scientific bacterioscopy. Without wishing to subscribe to all his suggestions, we must nevertheless admit that the profession of our country is not as familiar with modern bacteriological methods as could be wished. It may yet be shown that the practical utility of finding certain microbes in suspected cases has been overrated. But to deny them all diagnostic importance is to assume a voluntary blindness. From the accumulated evidences now before us, it would seem that the burden of proof rests with those who deny or dispute the validity of Koch's statements.

With especial reference to cholera, Koch shows, in the article referred to, that the comma-bacilli can be recognized as such only through the totality of their properties. Any single attribute, such as their peculiar shape, or a certain behavior toward stains, is not sufficiently characteristic to differentiate them from other and possibly quite harmless bacteria.

The alleged comma-bacillus ordinarily found in the mouth, and claimed by Lewis to be identical with the cholera microbe, has long ago been examined by Koch with negative results as to any discoverable relation between the two. Again, as regards the well-known allegations of Prior and Finkler, Koch shows that they employed faulty methods and, therefore, secured results devoid of significance. The specimens of their comma-bacillus which they submitted to him were found by Koch to contain four separate kinds of bacteria, but no cholera bacilli. For a detailed account of the essential differences between the true comma-bacillus and Prior's pseudo-bacillus we must refer to Koch's original paper. It is further stated by the indefatigable German scientist that in three cases of undoubted cholera morbus he found an abundance of various bacteria, but in no single instance any comma-bacilli. Moreover, Koch and his staff of collaborators have already examined the alvine evacuations in hundreds of cases of diarrhœa, dysentery, and other affections, as well as in health. Comma-bacilli were never found.

In a rapidly fatal case of arsenical poisoning, when the intestines and their contents showed naked-eye appearances closely resembling those of true cholera, no comma-bacilli could be detected.

And, finally, to crown all, cholera or fatal choleraic symptoms have been experimentally induced in various animals by the introduction of pure cultures into their intestines. Almost invariably the dead animals showed an abundance of the characteristic comma-bacilli in the intestinal tract. Koch reiterates, therefore, with added emphasis, his former assertions that the comma-bacillus is the specific microbe of Asiatic cholera, and occurs neither in health nor in any other disease. The sole point now on which the doubter can stand is that of denying the specific character of the inoculated disease. There does not seem, however, sufficient strength in this position to excuse either individuals, health boards, or governments from refusing to act upon the theory that Koch is right. And in this connection Dr. Wendt's suggestion, that we familiarize ourselves with scientific bacterioscopy, seems eminently proper, and should be strongly urged upon our authorities.

Koch's discovery is one of the grandest steps which have been taken in this century toward giving certainty to clinical medicine. And one must think almost with dismay of the tremendous collapse of scientific hypotheses and dogmatic teaching which its confirmation must produce. If it can be shown (and this yet remains to be done) that the bacillus is alone a sufficient cause of cholera, that it needs no prepared ground or special epidemic influence, the revolution of views necessitated will be indeed most extraordinary. But even should more extended observation show that the comma-bacillus can produce cholera only under peculiarly favorable conditions, its diagnostic significance would yet remain. And the early discovery of the microbe having all the weight of a pathognomonic symptom, would still give us a better chance of promptly suppressing an incipient epidemic than was ever before afforded us.

THE PRESENT STATUS OF THE QUESTION CONCERNING THE TREATMENT OF GOITRE.

ALTHOUGH goitre is by no means a frequent malady in our country, there is, nevertheless, among the foreign-born population enough of it to keep alive a certain interest in the disease, and especially as regards the means at our command for overcoming the annoyance of great disfigurement, if not the turning aside of grave danger. Hence neither physician nor surgeon can well afford to

ignore any positive advances in the therapy of this perplexing affection. In No. 244 of the *Sammlung Klinischer Vorträge*, October 8, 1884, Dr. P. Bruns, of Tübingen, publishes an instructive review of the subject in its most recent aspect, but more particularly from the point of view of the surgeon.

The author explains that it is a serious error, still prevalent in some quarters, to suppose that the steady growth and enlargement of a goitre constitute its chief dangers. A large experience has shown him that frequently the most formidable in volume are, at the same time, the most harmless tumors. It is the small-sized struma, and more particularly the substernal variety, that is potent for mischief, and often leads to a fatal issue. Death, indeed, happens unexpectedly in some cases where no violent symptoms of any kind had warned patient and physician of impending danger. The lightning-like rapidity of such an accident is explained by asphyxia and cardiac paralysis, following a sudden bending and collapse of the wind-pipe. Tracheotomy performed at the earliest possible opportunity has repeatedly failed to save life in cases of this class. All this would certainly show that persons afflicted with goitre are not to be dismissed with some consoling words in regard to the innocuousness of their tumors, but that their disease constitutes a legitimate cause for timely remedial interference.

The kind of treatment must necessarily vary with the nature of the thyroid swelling. Parenchymatous goitre should never be confounded in this respect with the cystic variety. In the former, treatment by iodides, both externally and internally, is always advisable before recourse is had to more energetic, but also more dangerous therapy. Experience has shown that iodides will prove of decided and lasting benefit only in those cases where marked effects quickly follow their first use.

Parenchymatous injections of iodine are at times very efficacious. But it is to be borne in mind that they are not without danger. Fatal consequences have resulted in more cases than one. The only radical measure of relief, however, consists in removal of the offending tumor. For all other operative procedures have been found to involve greater dangers and extend smaller chances of success than extirpation.

Cystic goitre is not amenable to treatment by the iodides. Puncture of the cystic cavities, followed by the injection of tincture of iodine, has been found to succeed in some cases. Billroth, indeed, claims twenty-nine cures out of a whole number of thirty-five cases treated in this way by him. From a careful study of a large number of cases of this class Bruns concludes that patients showing signs of disturbed laryngeal innervation should not be subjected to treatment by injection. As regards the operation of extirpation, the author pronounces it almost devoid of danger in uncomplicated benign struma. But he warns against complete removal of the thyroid body. For wherever and whenever this was done, a typical condition was sooner or later developed in the patient. It has been quite aptly termed by Kocher *cachexia strumipriva*. The most prominent symptoms of the latter consist in severe progressive cachexia, leading to a cretinoid condition of the sufferer, who soon shows a characteristic puffiness of the face. In addition there are alterations of the skin, general weakness, and decided awkwardness in all movements, without any diminution of muscular power, however, and finally, a pronounced loss of mental capacity.

From an analysis of this group of symptoms a remarkable resemblance to myxœdema becomes at once apparent. Add to this the fact that in myxœdema the thyroid body commonly atrophies, and the similitude seems still closer. Of course explanatory facts are entirely wanting to account for either the spontaneous development of myxœdema or the supervention of strumous cachexia after total extirpation of the thyroid. Various hypotheses have been advanced, but their discussion here would seem unprofitable.

As the final practical consequence of the most recent experience with struma it may be said that partial excision should always be practised. And in the individual case, before attempting operative interference, the surgeon should make sure that a portion of the gland can be left *in situ*. Total extirpation of the thyroid body, on the other hand, should never be performed. For it is physiologically unjustifiable, and should once for all be stricken from the list of permissible operations.

AN INTERNATIONAL HEALTH EXHIBITION IN NEW YORK.

The International Health Exhibition at London closed on October 30th. During its continuance from May to November there was a grand total of 4,167,000 visitors, or 27,000 per diem., and both from a financial and popular point of view it was one of the most successful exhibitions ever held in any country. This was due in a large measure to the concerts, restaurants, and various other "side-shows;" but despite all these the sanitary exhibits attracted much attention, and unquestionably a powerful impulse was given to sanitary studies and a knowledge of healthful living. The library of 7,000 volumes was very extensively used, lectures and conferences upon sanitary subjects were well attended, good work was done at the biological laboratory, while the very practical and objective teaching of the insanitary houses and similar exhibits could hardly fail to have impressed the most obtuse.

The exhibition conveys a lesson to Americans which we cannot believe will be long ignored. There should be a sanitary exhibition in this country, and in no part of the country more appropriately than in New York City.

We believe that America is ripe for such an enterprise. Sanitary problems have been studied, sanitary organizations established, and sanitary literature read more and more every year. The approach of the cholera has awakened a keen interest in the subject of municipal hygiene and maritime quarantine, and this interest will not subside until the danger is over or the epidemic has come and gone. The fact that the London exhibition was not only a popular success but that it might even be said that there is money in it will appeal with force to the minds of our money-getting countrymen. Apart from this there is economy in spreading abroad a knowledge of hygiene and inoculating the average mind with irrefragable proofs that healthfulness is worth working for and paying for. Let us have an International Hygienic Exhibition in the United States.

News of the Week.

What is the Correct Name for the New Local Anæsthetic?—Dr. D. K. Shute, of Washington, writes: "It strikes me that the correct, technical name for this drug is 'chloride of cocaine.' In an editorial of The Record for November 8th, it is stated that 'cocaine unites easily with dilute acids to form crystallizable salts,' therefore, if it unites with dilute hydrochloric acid it forms a crystallizable salt, which crystallizable salt is a 'binary compound' and *not* a 'ternary' one. Modern scientific works on chemistry make the characteristic termination of 'binary compounds' *-ide* and not *-ate*. 'Ternary compounds' have the characteristic termination *-ate*. A scientific chemist never speaks of the 'hydrochlorate of ammonia' as the result of the combination of hydrochloric acid (HCl) and ammonia (NH_3); but he calls the resulting compound chloride of ammonia or ammonium chloride (NH_3HCl) or, more properly, NH_4Cl). It is no more correct to say hydrochlorate of morphine, or hydrochlorate of cocaine, than it is to say hydrochlorate of ammonia. The result of the union of cocaine ($C_{17}H_{21}NO_4$) and hydrochloric acid (HCl) is, as stated above, a 'binary compound.' Therefore, to be correctly specified, this 'binary compound' should be written cocaine chloride ($C_{17}H_{22}NO_4Cl$). It is proper to say sulph*ate* or nitr*ate* of cocaine, because the union of nitric and sulphuric acids with cocaine forms 'ternary compounds.' I write these few lines in the hope that a drug having such brilliant properties may be dignified by being called by its proper scientific name, viz., cocaine chloride, chloride of cocaine, or cocainæ chloridum."

The Hospitals in New York Bay have been sadly in need of repair. The last Legislature stupidly refused to appropriate money for the purpose, but through the energy of the Health Officer and the liberality of the steamship companies, three thousand dollars was secured, and work is now in progress. Yellow fever cases go to Swinburne Island, small-pox and cholera to Hoffman Island.

Prior and Finkler *vs.* Koch.—While expressing as we have done elsewhere our great confidence in the superior skill and absolute trustworthiness of Koch, it is impossible to deny any credit to the entirely antagonistic views regarding the diagnostic and pathogenetic significance of the comma-bacillus expressed by Finkler and Prior. A correspondent of the *Allgemeine Medicinische Central-Zeitung* of November 8th, writes from Genoa under date of October 1st and states that Professor Finkler and Dr. Prior, of Bonn, have just finished their cholera studies at the Laboratory of the St. Andreas Hospital. He says: "The view maintaining the morphological similarity of the comma-bacillus and spirillum of Asiatic and sporadic cholera has been beyond question confirmed. So far as experiments here could determine, no difference in the cultures was observable. The various preparations of both kinds of bacilli show such a resemblance that no specialist could determine by microscopic examination the difference between Asiatic cholera and cholera nostras. By changes in methods of culture marked differences in the form and size of both kinds of bacilli may be produced. The pretended difference between the very thin bacilli of Asiatic cholera and the plump bacilli of cholera nostras is entirely artificial and not of the slightest importance."

These statements are utterly at variance with the recent announcement of Koch. We can only say at present that Koch is an investigator of long experience and established repute. Finkler and Prior are new in the field, and, furthermore, the report above quoted is anonymous and unofficial.

Notes on the Use of Cocaine.—The Baltimore Surgeons have been using cocaine extensively in eye and venereal diseases. The reports are as enthusiastic as any published in this city. Dr. Michael found it very useful in opening buboes and cauterizing venereal sores.

Dr. E. E. Holt, of Portland, Me., reports successful application of cocaine in eye cases (*Boston Medical and Surgical Journal*). Dr. W. E. Ground, of Toledo, O., has also had uniform success with the drug.

In Vienna the drug is being more and more used. Recent reports upon it have been made by v. Schrötter, Störck, Königstein, and Jelinck. The solutions employed are stronger (ten to twenty per cent.) than those which have been found adequate here. England and France have as yet had little to say about it, but wherever used the reports are unanimous in its favor.

Mr. Vanderbilt's Gift.—The letter of Mr. William H. Vanderbilt, announcing his munificent gift of $500,000 to the College of Physicians and Surgeons has been made public. Mr. Vanderbilt says in his letter, which is dated October 17, 1884:

"The health, comfort, and lives of the whole community are so dependent upon skilled physicians that no profession requires more care in the preparation of its practitioners. Medicine needs a permanent home where the largest opportunities can be afforded for both theory and practice. It seems wiser and more practical to enlarge an existing institution, which already has great facilities, experience, and reputation, than to form a new one. I have therefore selected the College of Physicians and Surgeons because it is the oldest medical school in the State and of equal rank with any in the United States. I have decided to give the College $500,000, of which I have expended $200,000 in the purchase of 29 lots situated at Tenth Avenue and Fifty-ninth and Sixtieth Streets, the deed of which please find herewith; and in selecting this location I have consulted with your Treasurer, Dr. McLane. The other $300,000 please find inclosed my check for. The latter sum is to form a building fund for the erection thereon from time to time of suitable buildings for the college."

The Price of Quinine is now about one dollar an ounce, but some druggists continue to charge at the rate of three or four dollars.

The Cholera in Paris was, at last reports, abating. A cable report to the *New York Times* says: The cholera has been handled very well in Paris. A large majority of the cases in the hospitals have been cured. The difficulty with the remainder has been either that the patient's system had already been ruined by alcohol or privation, or that the patient arrived at the hospital too

late. The latter is really the chief trouble everywhere. Dr. Chapman's treatment with ice-bags on the spine and Dr. Hayem's venous injections of a salt solution have both been successful. The old wrangle for and against Dr. Koch's theory continues, with the tendency to discredit it rather stronger than the contrary tendency.

The Value of the Hospital Collections.—In answer to a charge that the Hospital Saturday and Sunday collections have been an absolute detriment to the London hospitals, because of the diminished voluntary contributions at other times, the Secretary, Mr. Baker says: So far as Hospital Sunday in New York is concerned, it cannot be regarded otherwise than as a movement resulting in almost unmixed good. From the annual statements of the Associated Hospitals it is seen: 1, That during the past three years $201,651.44 was expended on the enlargement of accommodations; 2, that there has been an increase of $9,780.12 in the income from invested funds; 3, that there has been an increase of $43,036.72 from paying patients, at the same time that the number of free patients treated has increased from 6,698 in 1881 to 7,188 in 1883; while, 4, the increase of income from contributions toward current expenses other than derived from the Saturday and Sunday collection is represented by $22,774.84.

The Quack Triumphant.—Despite much talk and protestations, Professor Schweninger has begun his duties at the Charité Hospital, Berlin.

The Carnegie Laboratory.—We learn that Dr. Paul Grawitz has been unable to accept the position of Director of the Carnegie Laboratory and Professor of Pathological Anatomy at Bellevue Hospital Medical College.

Monument to the Late Professor Cohnheim.—The friends and pupils of the late Professor Cohnheim are arranging to collect funds for the purpose of erecting a monument to the memory of the deceased pathologist.

At the Recent Examinations for the Externat in the Paris hospitals there were 347 applicants, among whom were 6 women and 1 Turk.

Australia Refuses to Recognize American Medical Diplomas.—The Queensland Medical Board has passed a resolution refusing to register American diplomas, unless the professional knowledge of their holders is certified to by the passage of an examination at either of the Universities of Melbourne or Sydney. "It is much to be regretted," says the *Australian Medical Gazette*, "that there is not sufficient backbone in the other colonies to take a similar firm stand. The longest time required by the American colleges to be passed in study before the candidates are admitted for examination is three years, twelve months less than the shortest time required in the United Kingdom." It is to be regretted that Australians do not temper wisdom with their firmness and refuse registration only to colleges whose curriculum and requirements are below a good standard.

The Prudent Physicians of Italy.—Dr. A. Lagorio, writing from Chiavari to the *Chicago Medical Journal and Examiner*, relates some facts that may have a pertinent bearing here. He says: "At the first outbreak of the epidemic in Italy the Government made an earnest appeal to physicians to volunteer their work and skill in suppressing the disease and in treating its victims. This appeal had very little effect, for few responded; but through the presidents of the several medical societies of the State, our physicians assured the Government that they were willing to risk their lives as sanitarians and citizens; but, before doing so, they asked for a law making them equal to officers of the army, so that if the Government desired them to sacrifice their lives for the public health, it should assure them that their families would not have to suffer without receiving a suitable pension. The Government has not yet taken the matter in consideration." For physicians with a family and no money to leave for them such a proposition does not seem more than just. We shall certainly advocate the giving some help by the city or State to the families of poor physicians who die from epidemic disease contracted in discharge of duty.

A New Source of Lead-Poisoning.—Dr. Edson, of the Health Department of this city, has unearthed a new food adulteration quite startling in character, namely, the coloring of vermicelli with chrome yellow, a pigment containing lead, used for this purpose in lieu of eggs and saffron. Dr. Waller, chemist to the Department, analyzed a number of samples of vermicelli colored in this manner, and found in them an average of three grains of metallic lead to the ounce of food! Six manufacturers of the stuff were arrested and promptly fined at the Court of Special Sessions. The counsel defending them moved to have the cases dismissed because the Health Officers were unable to cite a single case where lead poisoning had been caused by vermicelli. The defence also brought witnesses who swore that they had eaten vermicelli colored with chrome yellow for long periods without injury. The publicity given the subject has, since the trial, brought to light one case of lead poisoning, the cause of which had been hitherto unexplained, in a person who had been in the habit of daily consuming a quantity of vermicelli purchased from a dealer whose stock, subsequently examined, was found to be colored with chrome yellow. Making our deductions from the amount of lead found in the vermicelli, we believe that other cases of poisoning must exist, caused by this practice, not recognized because practitioners have not had their attention called to this article of food as a possible source of lead-poisoning.

The Bismuth Test for Sugar.—Dr. D. Brown, of this city, writes: "In an editorial article in The Record for November 1st you call attention to: 'A New Bismuth Test for Sugar,' and credit its discovery and introduction to Almer and Nylander. Permit me to call your attention, to the fact that the late Professor Rand, of Jefferson Medical College, taught that test to his class in 1872; and you will also find it in his students' textbook, published the same year (see 'Elements of Chemistry,' pp. 373). Should he not therefore have priority?"

The Privacy of Hospital Records.—Dr. J. P. Fessenden, of Salem, sends us a reply to the Superintendent of St. Luke's Hospital, but we are unable to give further space to the controversy.

The Intelligent Interest in Medical Affairs displayed by the daily press is strikingly illustrated in the following description taken from a daily paper of this city: "For several years the physicians of this State have been considering the advisability of holding an annual meeting for the purpose of bringing together in consultation the leading members of the profession. The plan took form some time ago. This morning representatives from every section of the State assembled for the purpose of holding the first annual session." We are then told that Dr. Didman is President, Dr. Henton, Treasurer, and that Dr. Austin Flinn, Jr., was among the members present. More care is exercised in reporting glove fights.

Some Interesting Facts Regarding the Maintenance of Sick Seamen.—Seamen who may require surgical or medical attendance by reason of accident or disease, while employed on all classes of vessels, are at liberty to go either to a United States Marine Hospital, where the Government bears all the expense, or to call in the best outside surgical and medical attendance in the country, and the owners of the vessel are by law compelled to pay the bills. Therefore, if the Congressional appropriations for the maintenance of the Marine Hospital Service should give out, and the hospitals were closed up, all the sick and disabled sailor would have to do would be to put himself in charge of a first class doctor, who would have no difficulty in collecting his usual and legitimate fees from the vessel owner. "The repeal of the Marine Hospital tax," says *The Nautical Gazette*, "has opened a new field for impecunious physicians, and we may soon see our water-front graced by runners for doctors, just as runners solicit business for tow-boats, ship chandlery, etc." "Already two respectable physicians have called our attention to this condition of affairs, by requesting us to furnish them with copies of *The Nautical Gazette* in which was published a recent decision of a United States court upholding the constitutional right of a sick seaman to be cared for by a physician of his own choice, in a large seaport where the United States Marine Hospital had a corps of surgeons and one of the most perfect hospitals in the country."

Dr. W. M. Fuqua, of Hopkinsville, Ky., has been recently elected to the Chair of Anatomy in the Memphis Hospital Medical College.

Sir Spencer Wells on the Revival of Ovariotomy.—Sir Spencer Wells, in an address delivered at the opening of the Midland Medical Society on the revival of ovariotomy and its influence upon modern surgery, gives the following interesting *résumé* of the subject: "Before 1858, the operation, like all good things, had been of slow growth. One hundred years ago it was but a germ that might be descried in a lecture by John Hunter. Ten years later it was seed that fell from the hand of Bell. In little more than another decade it germinated as a living vitalizing reality in Kentucky. Sixty years ago it was transplanted to the land of its philosophical conception. In twenty years more we find it a sapling on English soil—growing slowly at first, and up to 1858 looking as if it might prove no more than a withering gourd. But by 1865 its root had struck firm, its stem stood erect, its branches were wide and strong, known and sought as a refuge by the sick and dying. That it was no withering gourd has been proved by all that the world has since seen. Thousands of perishing women have been rescued from death; many more thousands of years of human life, health, enjoyment, and usefulness have been given to the race; and to all future victims of a malady before inevitable in its fatality, it gives consolation, hope, and almost certainty of cure."

Unappreciated Opportunities for Young Physicians.—It is a somewhat curious fact that for a number of years there have been a considerable number of vacancies both in the Army and Navy Medical Departments[1] The Examining Boards meet again and again, but applicants do not come in sufficient numbers or with sufficient preparation to fill the vacant positions. It is difficult to understand why so many young men prefer long years of hard work and impecuniosity to the immediate receipt of a handsome salary and a good position.

Deaths from Cholera in New York in Past Epidemics.—Dr. John T. Nagle reports that in 1832 there were 3,513 deaths from cholera in this city, at the rate of 15.64 in every 1,000 persons. In 1849 there were 5,071 deaths, or 11.24 per cent. In 1854 there were 2,507 people died, or 3.95 per cent. In 1866 the deaths were 1,137, an average of 1.28 per cent. The epidemic of 1866 was of a virulent type, 583 persons who died having been attacked in the streets.

THE SIMS MEMORIAL FUND.

To the Medical Profession and Others throughout the World:

The great achievements of Dr. J. Marion Sims call for some more lasting testimonial than obituaries and eulogies. To him medical science is indebted for much brilliant and original work, especially in gynecological surgery. Those who have been benefited by his teachings and new operations, and such as have had the direct advantage of his personal skill are among the first to recognize and acknowledge this debt.

To him is due the honor of giving the first strong impulse to the study of gynecological surgery in America.

It is believed that the medical profession everywhere, the vast number of women who owe their relief from suffering directly to him, and those who realize the benefits he first made possible, will gladly unite thus to honor the man through whose original and inventive genius such blessings have been conferred upon humanity.

At the suggestion of many friends, therefore, the subjoined committee has been organized, and it is proposed that a suitable monument be erected to his memory in the city of New York.

To this end the active co-operation of the medical profession and the many other friends of Dr. Sims throughout the world is respectfully solicited. Contributions of one dollar and upward may be forwarded to the journal which has been constituted the treasury of this fund—The Medical Record, New York.

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The Question of Priority in the Use of Forceps in Breech Presentation. — Dr. H. T. Dunbar, of Union, N. Y., sends us the title-page of a pamphlet entitled "The Forceps in Breech Deliveries, with a Description of a New Instrument, by A. J. Miles, M.D., Professor of Diseases of Women and Children in the Cincinnati College of Medicine and Surgery." It is taken from the "Transactions of the Ohio State Medical Society for 1876." Dr. Miles antedates Dr. Fruitnight, therefore, by a year or more.

Reviews and Notices.

Daniel Gohl und Christian Kundmann. Zur Geschichte der Medicinal-Statistik. Von Dr. J. Graetzer. Pp. 155. Breslau: S. Schottlaender. 1884.

The author, Dr. Graetzer, gives a history of the origin of medical statistics, and an account of the lives and works of Gohl and Kundmann, the fathers of this science. The work is well printed and will be of much interest to statisticians and sanitarians.

Die Zuckerharnruhr mit einer ausführlichen Diätetik für Zuckerkranke. Von Univ. Med. Dr. Emerich Hertzka. No. 1, 8vo, pp. 181. Karlsbad und Nizza: Feller's *Diätetische Führer*.

This is the first of a series of "Diet Guides" which promise to be very useful. Dr. Hertzka has given us a very complete monograph on the diabetes mellitus, its etiology, symptomatology, progress, complications, and treatment. It will be a useful work to those who have these cases under treatment.

De la Répartition du Sang circulant dans l'Économie. Par le Docteur Emile Spehl. Thèse d'Agrégation, présentée à la Faculté de Médecine de Bruxelles. Bruxelles: A. N. Lebègue & Cie. 1883. The Distribution of the Circulating Blood in the Economy. 8vo, pp. 230.

This doctorate thesis represents a series of elaborate investigations into the distribution of the circulating blood in the brain, lungs, and muscles. The author has obtained some definite figures to represent the fact that the three organs referred to have more blood during functional activity than during rest. Perhaps his most interesting conclusion is that an environment of rarefied air draws the blood to the free surface of the lungs, but not of the skin.

Reports of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Adjourned Annual and Stated Meeting, November 24, 1884.

The adjourned annual meeting was called to order by the retiring President, Dr. S. Oakley Vander Poel, M.D., LL.D., who delivered the customary address, in which he reviewed the work done by the Society during the last year, its material and scientific prosperity, and introduced his successor in office.

Before resuming his place upon the benches he returned his heartfelt thanks to the Society for the uniform courtesy which had marked the conduct of the members toward him as their presiding officer, and suggested that more time be given to the discussion of the papers presented to the Society.

To do this the papers should not partake quite so much the character of an essay, but rather be directed to the elucidation of some particular point or method in the field of medicine or surgery. Let the papers be short and definite in purpose, and confined chiefly to controverted points, or such as require fuller demonstration. The same rules should regulate the debate. Nothing is more wearisome than a rambling debate where the narration of opinion and experience is so little related to the actual point under consideration. The remedy for this lies in the Society.

On motion by Dr. J. C. Peters, the Society extended to Dr. Vander Poel a vote of thanks for the faithful discharge of the duties of president during his term of office.

The Society then adjourned.

Stated Meeting.

The Stated Meeting was called to order by the President, Dr. Daniel Lewis, who delivered his inaugural address, in which he first expressed the deep and lasting obligations which the Society owed to his distinguished predecessor. He also expressed himself as profoundly grateful for the trust which the Society had bestowed upon him, and with its support would spare no effort to protect and advance its important interests.

Special reference was made to the question of increasing the membership of the Society, and also to the work of enforcing medical laws. The suit against the Eclectic Medical College is of such importance that no effort must be spared to win the case, as it is a diploma mill of such proportions as to almost rival the Buchanan College of Philadelphia.

The President then directed attention to the importance of having State Examining and Licensing Boards.

A very important change needed was a provision for revoking a license to practice.

Attention was then directed to the propriety of at once taking steps to secure a more commodious place for holding the meetings of the Society, as one must necessarily soon be secured on account of the recent good fortune of the College of Physicians and Surgeons.

At the close of the address, the President appointed the following

COMMITTEES FOR THE ENSUING YEAR.

Committee on Hygiene—Dr. Stephen Smith, Chairman; Drs. Alexander Hadden, E. H Janes, Cyrus Edson, Wm. L. Hardy.

Committee on Ethics—Dr. George A. Peters, Chairman; Drs. W. T. Alexander, Mark Blumenthal, C. C. Lee, E. Waitzfelder.

Committee on Prize Essays—Dr. F. R. Sturgis, Chairman; Drs. Frank P. Foster, W. R. Birdsall.

Auditing Committee.—Dr. P. Albert Morrow, Chairman; Dr. Gorham Bacon.

On motion by Dr. Vander Poel, that portion of the President's address which referred to change of place of holding the meetings was referred to the *Comitia Minora*.

After the report of the *Comitia Minora* Dr. Simon Baruch read a paper

ON THE THIRD STAGE OF LABOR,

in which he discussed at length the three plans of management—namely, expectancy, the Dublin, and Credé's method, and the method which occupies a middle ground, and which had been the most fruithful of good results.

Each plan was discussed in detail, with the citation of opinions of a large number of authorities, and also statistical information.

Dr. Baruch regarded the expectant plan as a retrograde step in the management of the third stage of labor.

He also believed that the superiority of Credé's method had been established by clinical experience and statistics. This method he regarded as a prophylactic against retention of the placenta and hemorrhage.

Under the third head the author of the paper discussed the physiological action of the uterus in removing the placenta, consisting of tonic contractions for its separation, and clonic contractions for its expulsion.

The modification which he advocated consisted mainly in the introduction into the vagina of two antiseptic fingers to retard too rapid expulsion of the placenta, to aid in removing it during a pain, and to secure removal of the membranes *without twisting*, and in the interval between pains.

Dr. Wm. M. Polk was invited to open the discussion, and said he did not understand how any man could wish to relegate Credé's method of expressing the placenta to the useless things to be discarded. He was heartily in accord with Dr. Baruch in his warning against discarding this method.

Dr. Baruch had advised that the chloroform be discontinued at the last period of the second stage, and to that view Dr. Polk took exception and remarked that he continued its use until the head of the child was expelled.

Dr. Polk also believed that no harm could come from twisting the membranes, and he thought that by so doing their delivery could be expedited.

Dr. R. A. Murray thought that the method practised by most accoucheurs was that which took the place of Credé's method; namely, keeping one hand firmly upon the fundus of the uterus as the child was expelled, and with delivery following the uterus down and retaining it there until permanent contraction of the uterus had taken place. He believed that Credé's method was applicable chiefly in those cases where inertia of uterus existed and there was threatened hemorrhage from chloroform, powerless labors, instrumental interference, etc.

With regard to twisting the membranes, he regarded it as most important in delivering the placenta, and further, that it should be done during a pain. Aside from these two points, he agreed thoroughly with the author of the paper.

Dr. Fruitnight spoke of the efficiency of the modification of Credé's method, namely, guarding against too rapid expulsion of the placenta, but he practised twisting of the membranes and believed it was advantageous to do so. Although the placenta might be retained within the uterus for several hours without doing harm, yet he regarded it as a foreign body and one which should be removed as soon as practicable.

Dr. Irwin said, concerning the practice of the Dublin school, that while the general sense might be in favor of the expectant method, yet interference was not precluded, as active as might be necessary. He thought the Dublin school could not be spoken of as either an interfering or an expectant school, but one which acts with due knowledge of the case in hand. The English school advocated less interference than did the Dublin school probably. With regard to twisting the membranes he thought there could be no doubt concerning the propriety of the procedure; pulling on the membranes was certainly objectionable.

Dr. Malcolm McLean spoke concerning the necessity of inspecting the placenta after it had been delivered.

Dr. Baruch said that he withheld the chloroform only at the very last moment of the second stage of labor. He objected to twisting the membranes because it encouraged pulling upon them. He objected to downward pressure under the circumstances mentioned by Dr. Murray, because it had been claimed that the Dublin method might produce inversion of the uterus. He therefore would not depend upon Credé's method in uterine inertia from chloroform, etc. In general he thought we should be guided less by individual experience than by the results in well-recorded cases in large numbers carefully watched.

Dr. Douglas, Treasurer, directed attention to the fact that he was prepared to supply the members with copies of

THE TRANSACTIONS OF THE MEDICAL SOCIETY OF THE STATE

at *one dollar* a copy.

Dr. Piffard offered the following resolutions, which were adopted:

REGISTER OF MEMBERS.

Resolved, That a committee of three be appointed by the President to prepare a register of the members of this Society, to be entitled, "The Register of the Medical Society of the County of New York;" and to print the same and distribute it to members without charge, said Register to contain the names of active members, together with their addresses and office hours.

Resolved, That the *Comitia Minora* be requested to make the necessary appropriations to carry the above resolution into effect.

The Society then adjourned.

THE PRACTITIONER'S SOCIETY OF NEW YORK.

Stated Meeting, November 7, 1884.

A. B. Ball, M.D., President, in the Chair.

Dr. George F. Shrady read a paper (see p. 591) on

CASES OF STRANGULATED HERNIA, WITH REMARKS ON TREATMENT.

Dr. A. C. Post asked Dr. Shrady if he stated that in several of the cases reported no hernial tumor existed before the symptoms of strangulation developed.

Dr. Shrady replied that no tumor had been reported by patients in two cases until strangulation occurred, one of the patients being about twenty, and the other about forty years of age. It was quite evident that a small hernia had existed in the latter case, and had been overlooked by the patient. The other case was clearly one of strangulated congenital hernia, the sac being the tunica vaginalis.

Dr. Post believed it to be a very rare occurrence that a hernia was strangulated when it first came down, except when it entered the tunica vaginalis. There were cases, usually in young men, in whom the tunica vaginalis had not yet closed, in which, from a violent strain, the intestine sometimes descended for the first time to the bottom of the scrotum and was strangulated. Some years ago, during one of his terms of attendance at the New York Hospital, a sailor was admitted, forty years of age, who, while making violent exertion at the capstan, felt something give way in the abdominal walls. When admitted to the hospital there was a large swelling of the scrotum with great tenderness on pressure, constipation, and vomiting. The case was specially interesting because it had been seen by Dr. Valentine Mott, who said he would stake his surgical reputation that it was not a case of hernia. The shape was so much like that of a swollen testicle that Dr. Mott was disposed to disregard the account given by the patient, and supposed that instead of straining himself he had been struck by the capstan bar, and that a traumatic orchitis had thereby developed. Dr. Post had investigated the case very thoroughly, and had made up his mind that it was one of strangulated hernia; but, if he remembered rightly, not one of the surgeons of the hospital, all of whom saw the case, agreed with him. One or two, however, expressed themselves doubtful, while the remainder agreed with Dr. Mott. Finally, consent was given to an exploratory operation, when Dr. Post cut down upon a strangulated hernia in a high state of inflammation, and the patient died from extension of the inflammation into the peritoneal cavity. The strangulation, however, was relieved. Since that time a number of similar cases had occurred in the practice of New York surgeons, but that one, he believed, was the first to which attention had been called. Dr. Knight, of New Haven, had met with a similar case.

With regard to the general remarks made by the author of the paper, he was disposed to agree with him, though not fully with regard to the subject of taxis. He thought taxis was often carried to an injurious extent, but he did not think it ought to be passed over so lightly as the author of the paper would seem to do, and especially that it should not be passed over without trying a change of position. In a case of Dr. Rogers, in which he had made arrangements to operate before a class of students, Dr. Post requested an opportunity to attempt to reduce the hernia by a change of the patient's position. He had the nurse stand on a bed and raise the patient's feet over his shoulders, and in that way the hernia was reduced and the operation spoiled. Dr. Post had succeeded in reducing the hernia in that manner in a number of instances. No violence was thus done, but the falling of the thoracic and abdominal contents toward the head pulled upon the hernia, which proved safer and more efficient than trying to push it into the abdominal cavity.

In a case which occurred during one of his terms of attendance in the New York Hospital, the patient had a scrotal hernia which was somewhat inflamed and very tender upon pressure. Before operating Dr. Post thought it expedient to apply leeches. Half a dozen leeches were applied in the early part of the afternoon, and, as he had to attend the funeral of a distinguished member of the profession, he intended to operate on his return, but by that time spontaneous reduction had taken place, produced by relaxation from local bleeding. In the main he agreed with Dr. Shrady, that a great deal of harm was done by violence in taxis; but on the whole he should think that it were better to make judicious attempts at taxis than to proceed at once to divide the stricture.

With regard to the operation, he believed that, as a rule, a successful operation for strangulated hernia did not prevent another descent—that is, the hernia required as much support from trusses as before the operation, and sometimes more, on account of greater relaxation of the ring. He thought it better in all cases to seek to produce a radical cure. In an interesting paper published by Mr. Banks, of Liverpool, the utility of that practice had been demonstrated. The sac was divided at its neck, dissected out, returned into the abdominal cavity, and the ring was closed as far as possible with silver-wire sutures, leaving room enough for the spermatic cord. He gave a number of cases in which no dangerous symptoms were caused by the closure of the ring, and in which there was either an absolute cure effected, or the size of the ring so much reduced that it was possible to retain the hernia in its reduced position by a moderate amount of pressure. Mr. Banks was in the habit of operating in cases of hernia not strangulated; in all cases in which the hernia could not be kept in place by a truss. In a certain proportion of cases he effected a radical cure, and in others the hernia could be kept well supported by a truss.

Dr. Post agreed with Dr. Shrady in the treatment of the omentum, namely, that in all cases in which it had been strangulated, or had existed in the sac for some time, it was better to excise it than to return it.

Dr. McBurney said that Dr. Shrady was to be congratulated on having had so many remarkable successes in a large variety of strangulated herniæ. He supposed the usual modern antiseptic precautions were observed.

Dr. Shrady replied that the wound was irrigated from time to time with the sublimate solution, but that the spray was not employed. He did not hesitate to expose the gut to the atmosphere, and in two instances the members of the house-staff were allowed to feel of the stricture before it was cut. In no case did peritonitis develop itself.

Dr. McBurney said there was one point in which he had been much interested, namely, the old method still used of employing taxis. Certain cases which had come under his observation had led him to regret that taxis was not more generally acknowledged to be a dangerous as well as a valuable procedure in cases of strangulated hernia. Under certain circumstances it could be used with safety, but as Dr. Shrady had already pointed out, it was capable of producing a great deal of injury. It ought to be more commonly understood that some of the so-called methods of inducing the return of the descended hernia into the abdominal cavity were practically useless, and the employment of such methods as cold, heat, or even of position, if it occupied much time, might prove very serious for the patient whose condition demanded a speedy operation. He thought it a serious question whether we had not gone sufficiently far with taxis when we had given ether and made gentle manipulation with the fingers in attempts to reduce the hernia.

Among a number of other cases in which taxis was believed to have done the patient harm were the following: A few years ago he saw a child in consultation in a neighboring town, a strangulated hernia having existed about twenty-four hours. Four or five physicians were present, two of whom took the ground that taxis was a very serious procedure in so young a child. They refused to give their consent to the administration of ether, and

thought taxis was entirely unjustifiable without it. One of the others would consent to taxis under ether, and the fourth supported Dr. McBurney in the recommendation of etherizing the patient, attempting taxis, and, failing, to proceed to operate. The child was not under the influence of the anæsthetic a minute before the hernia was reduced with the slightest manipulation.

About four years ago he saw a case in New Jersey which, as he learned after his arrival, was under the charge of two homœopathic physicians. The physicians refused to allow anything whatever to be done, saying the patient was too old to justify an attempt at taxis, it being a case of strangulated hernia, and an operation, they said, should not be thought of.

It seemed to him it would be very useful if positive rules could be given as to the kind and amount of taxis which should be employed in cases of strangulated hernia. He thought that the first important point to bear in mind was that taxis should not be attempted before etherizing the patient. By this means, he thought, we entirely relaxed muscular action in the abdominal walls and relieved all tension upon the strangulated parts, and then by inverting the patient the best conditions would exist for the return of the hernia. All local applications were intended, he believed, to reduce inflammation and congestion of the parts, but if it were intended to try to reduce the hernia by manipulation he thought the earlier it could be tried the better, and finding that it failed, an operation should be performed immediately.

With regard to the treatment of the sac, although his experience was slight he was inclined to agree in the view expressed by Dr. Post that the method so largely practised by English surgeons of late, of drawing together the pillars of the inguinal canal by suture after freeing the peritoneum, and thought it would be likely to result in permanent cure in many cases.

Dr. V. P. Gibney had been much interested in the remarks made with regard to taxis. For a number of years he had seen a large number of cases of hernia, and had effected reduction by taxis in many cases at all ages, and he was not now able to recall a single instance in which immediate or remote damage had been done by taxis as he employed it. It had been the custom at the Hospital for the Ruptured and Crippled to first try taxis, and that failing, to refer the patient to the consulting staff for operation. But taxis succeeded in nearly all cases. How much manipulation in attempts to reduce the hernia had been employed by physicians before the patients came to the hospital he was unable to say, but after their admission he and two assistants would try taxis, then give ether, or, if the patient were a child, chloroform, and attempt reduction again, placing the patient in different positions so as to favor the return of the hernial contents. Sometimes gentle and persistent taxis would be employed half an hour, and, failing, an anæsthetic would be administered, and usually the hernia would finally be reduced. Last year a child was brought to the hospital which was said to have been suffering from a strangulated hernia for twenty-four hours. There was some vomiting, a very tense tumor, and marked signs of strangulation. Dr. Gibney employed taxis for half an hour, then gave chloroform, and after another half-hour's manipulation succeeded in getting the tumor about two-thirds reduced, but not being able to produce any further effect, he directed the mother to take the child home and if the hernia caused any further trouble to call in a physician. She returned the next day and said that in carrying the child home the hernia disappeared. This was not a solitary experience.

Dr. Gibney was unable to understand how intelligent taxis was going to do the harm which it had been claimed that it would do. But he agreed with Dr. McBurney, that there ought to be some definite rules for the employment of taxis. If after taxis had been employed the surgeon should lose the case by an operation, there would be a natural tendency to attribute the bad result to the manipulations employed by the physician who first saw the case. He had seen a number of cases relieved by lifting the patient by the hips, and other changes in position. He supposed that when an anæsthetic was employed the beneficial result was brought about in the manner described by Dr. McBurney, both as to the action of ether and chloroform.

Dr. John A. Wyeth had been surprised at the number of successive successful operations for strangulated hernia reported by Dr. Shrady, especially as in many of those cases the condition had existed for so long a time as presumably to debar a good result. If he understood the histories correctly, in a majority of the cases strangulation had existed over twenty-four hours, and in some as long as three days, which was a very long period for strangulation to exist and still permit of recovery after an operation.

It had been Dr. Wyeth's practice to operate early. Since December 20, 1882, he had performed seven operations for strangulated hernia, all of the patients recovering. He believed that the success of the operations was due to the fact that they were performed early after strangulation had occurred. In some of the cases, however, he could wish to have seen the patients sooner. He believed that much of the danger of the operative procedure was due to the previous improper use of taxis. He regretted very much to hear so eminent an authority as Dr. Gibney express himself so favorably toward taxis, thus encouraging physicians, especially young men, to place reliance upon this procedure in cases of strangulated hernia. He doubted whether there was a surgeon present who had not met with cases in which the patients had been brought near the point of death from prolonged and indiscriminate use of taxis. No man ought to touch a strangulated hernia until the patient had been placed under the influence of ether. He himself, however, was loath to try taxis even after having anæsthetized the patient. He had never yet been able to reduce a hernia except by an operation. But then he had not pushed and bored the gut back as some would do. He knew of one case in which the hernia had been reduced within the sac, and it was afterward necessary to operate to relieve strangulation.

An operation for strangulation was as free from danger, when done under antiseptic precautions and early enough, as any major operation could be. There was one precaution which he took in performing the operation. The inguinal ring when cut into acted as a funnel for the conduction of fluids into the peritoneal cavity, and to prevent any accident arising from this cause he inserted his finger into the ring and thus obliterated it. The gut was thoroughly irrigated with the sublimate solution, then returned, and the finger placed on the ring and retained there until the completion of the operation. Two strong sutures were passed through the entire thickness of the edges of the wound, including the abdominal wound and sac in one mass, and a drainage-tube was inserted. He thought Dr. Shrady regarded the operation as being less difficult than it really was. Out of Dr. Wyeth's first three cases operated upon for strangulated hernia, two of the patients died, and it was not improbable that the difficulties of the operation and lack of experience had something to do with the fatal issue. In femoral hernia there was danger of injuring the obturator artery when derived from the epigastric. Femoral hernia occurred most frequently in females, and it was in females that we found this artery in every other case derived from the epigastric branch of the external iliac. In all of the cases which he had found in which death had resulted from hemorrhage into the peritoneal cavity from injury to this vessel, the accident occurred in women.

In his seven cases the strangulation had existed for periods varying from two to forty-eight hours. While the gut in one or two instances was mottled, yet the circulation was restored. In one case the condition of the gut was such that he would have exsected a part, had it

not been that the operation was performed by candle-light in a tenement house. The patient recovered.

Dr. J. W. Wright said with regard to taxis, that he had always entertained the opinion expressed by some of the speakers, that, as it was generally employed, it was a very dangerous procedure in strangulated hernia. He thought, however, that there was a way to employ taxis which was safe, or at least by which it was not made a very dangerous measure. Taking hold of the hernial tumor which was strangulated, and pressing it violently with all the strength of the hand, without using even the ordinary and necessary skill to get the hernia back, if possible, in the inverse order to that by which it had come out, was a very dangerous procedure. So impressed had he been with this idea that he had come to make it a law to himself never to attempt taxis in a hernia which had been strangulated for a long time, until the patient had been put under the influence of an anæsthetic, and then, if after one reasonable trial, not a very violent one at that, he did not succeed in reducing the hernia, he felt that the patient's chances of recovery were infinitely better if he proceeded at once to operate. With regard to the reduction of strangulated hernia by a change of position, alluded to by Professor Post, he considered it a very important point. He could recall two or three cases in which herniæ had been strangulated, and two or three attempts had been made at taxis by men who were supposed to have the requisite skill, and had failed, but the taxis had succeeded at the first trial when the patient's position was changed. In two cases which he recalled the reduction had been very easily accomplished by the operator standing with his feet upon the bed, spreading the patient's limbs, taking him by the knees, and lifting his body upon the body of the operator. It was not a very genteel position, especially if the patient were a female, but in the male he had known it to succeed very easily. One of these cases was that of an unrecognized strangulated femoral hernia which had occurred in connection with a double inguinal hernia. Both of the inguinal herniæ were down at the time, but neither of them was strangulated, and yet the patient had well-marked symptoms of strangulated hernia, and a very careful investigation revealed the presence of a very small femoral hernia which was irreducible by taxis in the recumbent position, but which was reduced by taxis when the patient's hips were elevated in the manner described, and with immediate relief of the symptoms.

With regard to what should be done at the operation. First, he did not regard the operation for the relief of a strangulated hernia a very simple affair, because he felt that every hernia was a hernia by itself, and the details of the operation for any given case could not be learned from books nor from lectures. Every hernia had certain peculiarities of its own. With regard to the treatment of the sac his impression was that the method described, of dissecting it out, and stitching the walls through and through, offered a much better support, and a much greater probability of curing the hernia than the operation which was commonly resorted to. That plan had been very clearly brought out by the gentleman to whom Dr. Post had referred, Dr. Banks, of Liverpool, who in performing the operation left the abdominal walls and peritoneal surfaces as smooth as possible, so as to guard against the formation of a new hernial pouch.

Dr. Post remarked that the urgency for an early operation was greater in small than in old or large herniæ, the reason for which was apparent.

Dr. R. F. Weir agreed with most of the speakers, that there was considerable risk attending taxis, but in connection with the question of change of position it would often be found that lateral motions would aid in the reduction of the hernia. In cases in which strangulation had existed for some time taxis had other risks than those simply pertaining to manipulation. The gut might be in such a condition that, on being thus reduced, circulation would not return and it would give rise to a fatal peritonitis. He had become so strongly impressed with this danger that he had made it a rule, when called to see a case of strangulated hernia which had existed for some time, not to be satisfied with reduction by taxis, but to operate and see what was the condition of the hernial contents before returning them to the abdominal cavity. It was to be taken for granted that a sufficient amount of taxis had already been made before the patient had been placed under the care of the surgeon.

He thought the treatment of the wound adopted by Mr. Banks, and referred to this evening, was attended by some risks, as in one case the patient died of what the house surgeons supposed to be peritonitis resulting from the operation, but, as the post-mortem showed, death took place from strangulation of a portion of gut in the narrowed ring. He believed other surgeons had had a similar experience with this method.

Dr. Shrady, in closing the discussion, said the paper was not intended to be an exhaustive one on the subject of hernia. He had been more particularly interested in the remarks made upon taxis, and he presumed that all who had referred to this point were of one accord. He thought it specially important that taxis should not be attempted seriously until after the patient was under ether, a point which he had already brought out in the paper. That being the case, no one should attempt taxis unless he was prepared to do herniotomy. Taxis was tried in all the cases reported in the paper after the patients were etherized, but unsuccessfully.

With reference to cutting off the sac and securing it to the abdominal ring, he had had one unfortunate experience. He thought that the method spoken of by Czerny, about five years ago, was very promising from a theoretical standpoint, and he tried it in one case of irreducible hernia in which there was great adhesion of the sac. He dissected out the sac, which was one of large size, cut it off, secured the stump in the external ring, and thought he had made a very nice operation until peritonitis developed, from which the patient died. Since then he had not meddled with the sac in that way, but compromised by sewing as high up in the neck of the sac as he could by strong ligatures, taking a stitch through the pillars of the ring, but leaving the sac in position. In four cases he was quite certain there had been entire obliteration of the sac. He had stated in the paper that the healing of the wound by granulations was not a disastrous accident, as thus the sac would become obliterated. Of course a little pouch would be left, but by a support the patient would be protected from further descent of the hernia.

The kind of taxis referred to by Dr. Gibney was skilled, and of a different nature from that usually practised, by which the patient was much harmed before he came under the care of the surgeon. He had often succeeded in reducing the strangulated gut by taxis, but always preferred to give ether before resorting to it. He believed that the method of changing the position of the patient by suspending him by the legs, as recommended by Dr. Post, was very often successful. Dr. Shrady always tried it in connection with the other accepted manipulations before resorting to herniotomy.

MODIFIED ELECTRODE.

Dr. Beverley Robinson presented a modification of Dr. Lincoln's electrode for use in the naso-pharynx. The original had a cup made of ebony, bone, or ivory, and in his hands had split and came near entering the air-passages of the patient. He had replaced this by a hard rubber cup, which, besides not being likely to break, became less rapidly hot; but it was liable to take fire, and also to become soft. Finally he had substituted an electrode protected by a layer of asbestos, which seemed to be open to none of the foregoing objections.

GENERAL TUBERCULOSIS.

Dr. V. P. Gibney, presented a specimen from a case of general tuberculosis, accompanied by the following history:

G. R——, aged three and a half months, came under observation one month before death. Parents moderately healthy, no history of hereditary tuberculosis being traced. The mother had had seven other children, three are living in fair health, the others were either still-born or had died when a few months old, one with convulsions, the others "wasting away." The child was a twin, the brother having died at the age of seven weeks. It was at birth of fair size, but had never thrived after the first few weeks, although nourished at the breast. The bowels were generally loose, the child having three or four passages a day. When it was first seen it was thin, but not emaciated. No signs of inherited syphilis were present. Nothing was found in the lungs but a few scattered râles. There was no vomiting.

The case was at first believed to be one of malnutrition, but treatment was without avail. The case grew steadily worse, and a slight febrile movement, somewhat irregular in its occurrence, was noted. The emaciation finally became extreme. The fontanelles were depressed; there was extreme nervous irritability, but never any convulsions. The bowels continued loose, and death occurred from a progressive asthenia. There was slight tympanites noted at times. Cough existed for two weeks preceding death. At the last examination of the lungs, about ten days before death, only the signs of diffuse bronchitis were found.

Brain was found normal. Right lung adherent through nearly its whole extent. A small sacculated pleurisy at its lower anterior border containing about an ounce of fluid. Both lungs studded with tubercles on the surface, and through their substance. A small cavity about the size of a pea near the root of right lung. Bronchial glands enlarged and cheesy. Heart normal. Liver studded with tubercles, as was also the spleen. This was about twice its usual size. Many tubercles found in the great omentum, but no lymph or pus. A few tubercles on the surface of the kidneys.

The Society then adjourned.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, November 20, 1884.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

DR. A. C. POST exhibited a new hard-rubber syringe, so arranged that it could be opened at both ends for inspection of the pistons, and could be worked with a single hand.

THE PRESIDENT introduced Dr. W. C. Wile, of Connecticut, and Dr. M. F. Price, of San Francisco, ex-surgeon of the United States Army, and invited them to seats upon the platform.

THE SURGICAL MANAGEMENT OF RACHITIC DEFORMITIES OF THE LOWER EXTREMITIES.

DR. V. P. GIBNEY read a paper on the above subject in which he said, first, by the term surgical management he wished to convey the impression that mechanical appliances as well as cutting instruments are surgical means for effecting relief.

With reference to knock-knee, it was not every case that demanded surgical interference. Exaggerated cases have been known to recover spontaneously.

Dr. Gibney then referred to the definitions which had been given by different authors, as Macewen, of Glasgow, Little, of London, Poore, of New York, and others, and asked, Do any cases of true knock-knee recover spontaneously? It was his opinion that a fair proportion of the cases in the United States make a spontaneous recovery, and the statement was based upon the following reasons:

First, between the years 1871 and 1877, at the Hospital for the Ruptured and Crippled, he saw 252 cases in children under fourteen years of age suffering with knock-knee. The apparatus employed was theoretically inoperative, practically it seemed to be of some service. In nearly all the cases the limbs were restored to their normal position. The apparatus employed consisted of a pair of springs which supported the limbs, but which did not exert any force against the deformity.

Another reason for the belief in the spontaneous cure of knock-knee was the scarcity of adult cases in this city. Seldom does one see adults with this deformity walking on the streets of New York. He felt safe in asserting that the larger number of cases have occurred in children between three and eight years of age, in which osteotomy has been performed for the correction of the deformity of knock-knee.

With regard to bow-leg, he was sure that many general practitioners could refer to children whose limbs were bowed during early childhood, but which ultimately became straight. Of the 1,005 children with this deformity seen at the Hospital for the Ruptured and Crippled, 927 were in children under fourteen years of age. Only three cases were seen in adults, and only five occurred between the ages of fourteen and twenty years. In the 927 patients the age ranged from two to four years. Dr. Gibney believed that he would be correct in the statement that the great majority of the patients operated upon in this city for bow-legs, had been under seven years of age.

The author of the paper then discussed the following questions: First, What cases can be safely left to nature? Of knock-knee and bow-leg he would say that children under two years of age should not be subjected to operation unless the deformity be very exaggerated; also that children under three years of age, with a moderate degree of deformity, could safely be left to nature.

Knock-knee and bow-leg for the most part are due to rickets, and therefore considerable was to be expected from medicinal measures toward effecting a cure. Dr. Gibney then spoke of climatic influences, and the use of phosphates of lime and soda in the treatment of rickets, and expressed the opinion that the latter were satisfactory only as they improved digestion and general nutrition.

In what cases should manual force and retentive splints be resorted to? In the first place, in those patients whose parents are unable to buy an apparatus or too improvident to give any attention to the correction and cure of the deformity. Second, when one has but little time to effect a cure. Third, where the bones will yield readily to such force, the other conditions being present. Dr. Gibney quoted upon this point the conclusions reached by Macewen, that it may be safely concluded that *brisement forcé* has served its time, and cannot be practised in the presence of the more exact methods of the present day. From his own experience and from the drift of sentiment, he felt well assured that Macewen's conclusions would be more strongly supported at the close of 1884 than they were at the end of 1883 in the treatment of genu valgum.

With reference to apparatus, Little, of London, was an advocate of mechanical appliances, while Macewen, of Glasgow, was opposed to their use.

So far as bow-legs are concerned, Dr. Gibney had been guided in their treatment by the principle, that if the bones could be sprung into position by the use of a moderate amount of force, a retentive apparatus, consisting of springs, could be applied with benefit. If the femur is curved and the inner condyle unusually long in a case of knock-knee, he tests with his hands the ligaments of the knee and the femoral curve, and is guided by the result in his selection of cases for apparatus. The age beyond which he found this test failing was four and five years.

All springs now in use are constructed upon one principle, namely, force brought to bear against the convexity of the curve at its apex. Dr. Little, of London, applies continuous pressure; Dr. Shaffer, of New York, employs momentary pressure; Dr. Poore, of New York,

reports that about thirty per cent. of the cases of genu valgum are cured by mechanical appliances.

Osteoclasis.—This operation has not become popular in this country, notwithstanding its popularity in France.

Osteotomy.—This operation has become applicable to nearly all rachitic deformities of the extremities. For the details of the operation Dr. Gibney referred to Dr. Macewen's writings. He simply mentioned what Dr. Macewen had stated at the International Medical Congress at Copenhagen, that in none of his cases had death occurred due to the operation. The author of the paper then spoke of the accidents which might occur in osteotomy, especially the hemorrhage. In speaking of the applicability of osteotomy he made the positive statement that he had never seen an anterior tibial curve which had been corrected by apparatus of any kind.

In nine linear osteotomies and two cuneiform osteotomies which he had performed within the last year, in none of the cases had the temperature of the patient risen above two degrees Fahrenheit. In one case of supracondyloid osteotomy a result occurred which he believed to be unique—namely, paralysis of the external perineal nerve, due to injury by the callus.

From his experience in the performance of osteotomy Dr. Gibney had learned the following lessons:

First.—Exaggerate the correction of the deformity.

Second.—Examine the limb at the end of a week and ascertain whether the amount of the correction gained is the amount desired.

Third.—Do not hesitate to refracture by manual force, if necessary.

Fourth.—With strict attention to details in operating and in the use of good plaster-of-Paris splints, cases can be treated in dispensaries nearly as well as in hospitals.

Fifth.—In dispensary cases do all the operating you propose at one sitting.

Further, Dr. Gibney remarked that he had employed and believed that Listerism possessed advantages, especially with reference to cleanliness. Support of the limb for three months after the operation, by some form of splint, was not too long.

The President invited Dr. Joseph D. Bryant to open the discussion, who said, with reference to the cases which can be safely left to nature, that he agreed with Dr. Gibney entirely on the point that in a large number of cases occurring in children the patients would, if permitted to go untreated, ultimately make a complete recovery.

The cases, however, which can be safely left to nature involved a broader question, namely, the cause of bow-leg and knock-knee. The exact cause of bow-leg, it was true, was not yet thoroughly determined. The weight of the body had been regarded as one of the influences, and probably had much to do with the production of the deformity. Muscular contraction had been said to be one of the causes, although there was some doubt on this point. The position of the child also, as the majority of these children sit cross-legged, had been alleged to be one of the causes.

If the weight of the body in walking and muscular contraction were among the physical causes of bow-leg, then it was true that something could be done to correct the deformity or prevent its complete development, and the fact that many whom we see upon our streets do grow up with bow-legs gives rise to the question, Can we safely leave any of them to nature?

So far as medication and hygiene were concerned in the treatment of rachitic deformities, the question was probably well settled, and he had nothing to add to what had already been stated by the author of the paper.

With reference to the application of manual force, the rule which he had adopted was this: If in connection with bow-legs he found that by applying force he was able to spring the bones into their normal position, he had endeavored to rectify the deformity by making forcible pressure upon the convexity of the curve two or three times a week.

Dr. Bryant then referred to a case of exaggerated anterior curve of the tibia, which he cured in this manner: He placed the patient, a boy, under the influence of an anæsthetic, then exerted as much force as he possibly could, without fracturing the bone, in the direction of reducing the curve, applied a simple retentive splint, repeated this operation a number of times, and the result was a complete cure.

He regarded this method of treatment as preferable to osteotomy in all cases of this kind, aside from the fact that in osteotomy we have a compound lesion.

With regard to apparatus, he believed that every case, in which the deformity could be corrected by manual force, was a proper case for the use of some form of retentive apparatus. He was rather inclined to favor the use of springs which should not exert very much force, only sufficient to correct the deformity without producing any injury of the soft parts.

With reference to osteoclasis, so far as his knowledge extended, it had been used in this city very little indeed. He certainly never would resort to it where pressure was to be brought at an angle involving the joint, as in genu-valgum. The danger to the ligaments and to the synovial membrane, and the danger of crushing the soft tissue of the head of the tibia, were reasons for not resorting to it in preference to osteotomy. However, in marked tibial or femoral curve, where the force could be brought directly upon it without interfering with the epiphyseal junction, there might be no very great objection to it, except in the anterior tibial curve.

With reference to osteotomy, Dr. Bryant regarded it as one of the important advances in surgery in the present century, especially when combined with antisepsis. He had not seen any ill results in his cases in Bellevue Hospital, and had not seen a drop of pus associated with his operations. Dr. Bryant then referred to an aggravated case of antero-lateral curve of the tibia, due to a badly united fracture. He operated upon the patient in Bellevue Hospital, and found the bone so hard that the chisels were broken in attempting to divide it. The wound was dressed antiseptically, and within eight months after the operation the patient went out entirely cured. He referred to the case merely as an illustration of the beneficial effects produced by antiseptic dressings.

The oldest patient upon whom he had performed osteotomy was sixteen years of age. He performed the supra-condyloid operation. In that case there was a rise of temperature on the third or fourth day, but this quickly subsided, and no further rise occurred. So far he had not met with any accidents.

With reference to the applicability of the operation, he should limit it to all those cases where consolidation of the bone has taken place. He thought the general importance of the subject was sufficient to engage the attention of all surgeons.

Dr. C. T. Poore thought that unless the real pathological condition was taken into consideration none of these deformities could be treated intelligently. In one class of cases the deformity was not due to bone lesion. When it was due to bone lesion he thought it was always due to rachitis, leaving out traumatic cases. If that was true the question arose, What shall be the mode of treatment? In the early stages of rachitis the bone can be bent and the deformity corrected, but if knock-knee is due to enlargement of the internal condyle, or bending of the femur, etc., or if the bones have become hardened, they cannot be bent, and, therefore, the deformity cannot be corrected in this way.

He had no personal knowledge of spontaneous cure occurring in these cases of deformity of true bony origin. Dr. Gibney had stated that he had seen such cases, and the statement was to be accepted without question; but Dr. Poore did not think that they were very common.

The fact that we did not see on our streets many cases

of knock-knee in adults he thought was due to the fact that there was not so much of rickets in this country as in some other countries.

He thought that the deformity could be cured by mechanical treatment if taken in time, and splints were properly applied. However, if after a time no further improvement could be secured, there was nothing further to be gained by the use of splints.

With reference to the date at which bones became hard, each case must be judged by itself. One child may have rachitis and recover with hard bone at three or four years of age, while in another case the bones will not become hard until eight or nine years of age. He regarded it simply as a question of nutrition. After the bones have become hard, he thought that the deformity could be corrected only by operation.

With regard to osteotomy, he had nothing to add to what had been said. In those cases in which hemorrhage had occurred, except one in which the femoral artery was injured by a spicula of bone, the accident was due to causes which could have been prevented. In his own cases he had not kept his patients in bed more than five weeks. He removed the plaster-of-Paris dressings at the end of four weeks, and probably the patient was out of bed within a few days, and he had not had any recurrence of the deformity, nor did he know of any in which the deformity recurred after the patients left his charge.

With regard to osteoclasis, he thought that it was far better than manual force, for the fracture could be made at any point desired, provided that it was done at a sufficient distance from the malleoli. He had never produced a fracture less than three inches above the malleoli, and he had never seen an accident of any kind from osteoclasis, nor had he ever failed to correct the deformity by resorting to this method of treatment. He had not had any experience in bending bones by means of mechanical appliances.

With regard to osteotomy for bow-legs, it seemed to him that in all cases of long curves the osteoclast could be used with advantage; the short angular curves are better treated by osteotomy. In his operations he had not resorted to Listerism strictly speaking, nor did he dress the wounds according to Macewen's plan.

Dr. M. H. Henry had not, within the last three years, performed osteotomy, but he had seen the operation performed by his friends, and he was in perfect accord with the statement which had been made by Dr. Gibney in his excellent paper. For many years, while in charge of the Immigrants' Hospital, he saw a large number of children of foreign birth. There were no colored children, and there were but few cases of deformity among the Italian children. He mentioned these facts because they served to account for the frequency of the disease as it exists among the children of foreign parents. The children were mainly rachitic, and it might be interesting to notice that under the benefits of better diet which they received at the hospital, better beds, better ventilation, and clothing, they invariably improved, and for the most part got entirely well. The limit of their stay on the island was five years, and it was noticed that whenever they were treated there for more than one year they improved with but little surgical interference.

Dr. M. Josiah Roberts remarked with reference to the first question, What cases can be safely left to nature, that the fact must not be overlooked that the death-rate in childhood far exceeded that of any other period of life. This was especially true of those children who were the subjects of constitutional disease, and therefore might explain the scarcity of these deformities seen in adults. Besides this, recovery from the deformity was one of degree, and we must distinguish definitely what was meant by a cure, when complete recovery was spoken of; and when speaking of complete cures, it was necessary to ascertain that the cure did not fall short of the positive normal standard. He would venture that he could show any gentleman who would walk with him through the best parts of the city numerous cases of knock-knees and bow-legs in slight degree, and yet it would be found that the patients were incapable of prolonged locomotion, or of standing upon their feet for long periods of time. It did not always require, in a case of knock-knee, or in-knee, a deformity of more than from two to five degrees to cause very considerable inconvenience.

While he agreed with the author of the paper that there were cases which recovered spontaneously, he wished to impress the fact that all the cases which were supposed to be cures were not complete recoveries. Dr. Roberts then exhibited a series of photographs illustrating the improvement which occurs from two years of age upward until fourteen years of age is reached, when the deformity was apparently completely removed; but the photographs showed that it still remained to a moderate degree.

With reference to the statement made by the author of the paper, that in most cases of bow-legs the deformity was due to the continuous curve from the hips to the malleoli, he wished to take exception. While the deformity appears to be largely in the shaft of the femur and of the tibia, these were in fact quite straight, and the deformity was confined mainly to the ends of the bones. Dr. Roberts exhibited photographs illustrating this point, and made the general statement that, in all cases of deformity we must expect the deforming influences to manifest themselves where there is the greatest mobility, namely, at the articulations. Next in frequency are the points which are separated by cartilaginous substance, as the diaphyses and epiphyses. In bow-legs the principal changes had taken place at the articulations between the epiphyses and the shafts of bones.

With reference to what cases can be left to nature, while he admitted that certain cases did recover, he was thoroughly convinced that in every case recovery might be aided by surgical appliances, and that the patient could get well in a much shorter time with surgical assistance than when left to nature.

With reference to manual force, he agreed with Dr. Poore, that it is applicable only in a limited number of cases, where the bones are very soft indeed. In nearly all such cases cure can be effected by means of mechanical appliances, and the limbs made absolutely straight, as determined by goneometric observations.

Dr. Roberts then spoke of the necessity of using instruments of precision in determining the degree of deformity which is present.

With reference to mechanical appliances, the theories once in use were good in their way, many of them were excellent; but he did not think that the ultimatum had yet been reached in the application of force for the correction of deformities. He then described at some length an apparatus for treatment by means of adhesive plaster, devised by the founder of orthopedy in this country, Dr. Davis, of New York. He also spoke to considerable length concerning osteoclasis and osteotomy, and closed with a description of his electro-osteotome, with which he had performed a large number of osteotomies.

Dr. Hopkins referred to a case in which he performed excision of the joint for knock-knee.

The President asked for information with regard to one point, namely, what was the experience concerning the influence of sex as affecting the frequency of the disease, and also as affecting the frequency of spontaneous cure. The reason he asked was because it had occurred frequently to him to have anxious mothers express great solicitude with regard to the presence of bow-legs or knock-knee in their children. He had been in the habit of saying to them, "Wait and let us see what the result will be," and in most instances perfect recoveries, so far as he had been able to ascertain, had taken place before adult life was reached.

Dr. Gibney, in closing the discussion, remarked with reference to the question asked by the President, that so far as he was able to recollect the cases of bow-leg and

knock-knee occurred about equally in the sexes. One of the results which he had noticed in these cases, however, had been what is known as flat-foot, and whenever at the Hospital for the Ruptured and Crippled he had seen a case of flat-foot he made further inquiry, and almost invariably found that the patient had during childhood suffered from bow-legs.

With reference to the death-rate among children, mentioned by Dr. Roberts as affecting the number of cases of deformity of the lower extremities seen in adults, he would remark that in Glasgow it was a notable fact that bow-legs and knock-knees among adults were very numerous, and therefore that the number was probably not affected materially by the death-rate occurring in children in that city. The cases of adults which he had seen had been mostly in stout persons, and belonged to the form which Dr. Little, of London, had termed atonic knock-knee, without the existence of bone deformity in early life.

With reference to the class of cases referred to by Dr. Hopkins, he could only say that his paper was restricted to the treatment of rachitic deformities.

The Academy then adjourned.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

DISCUSSION AT THE MEDICAL SOCIETY OF LONDON ON "LANCING CHILDREN'S GUMS"—MYXŒDEMA—EFFECT OF EXTIRPATION OF THE THYROID BODY.

LONDON, November 8, 1884.

Our societies are all now in full work. On Monday last at the oldest society, the entire evening was occupied with the subject of lancing the gums in children. This was introduced in a racy statement of his opinions by Mr. Edmund Owen, Surgeon to St. Mary's Hospital and to the Children's Hospital. His first reason for bringing it forward was, he said, his slight practical acquaintance with the subject, and though he told us that he had carried a gum-lancet in his card-case for years, he added that he found no work for it upon infantile gums. This experience precisely agrees with my own. In youth indeed I lanced many a baby's gums, it is to be hoped with benefit; but later on, as fashions changed, I thought out what ought to be the reasons for doing so, and resolved that I would look for the tumefaction and redness I had been taught would certainly appear if this necessary operation were delayed, or that I would wait until such evident obstruction to the eruption of teeth occurred as we sometimes see in the case of wisdom teeth in older patients. The result has been that though I have sometimes assisted the emergence of an adult's wisdom tooth, my baby-patients have escaped scot-free. But to return to the discussion, Mr. Owen said how often do we hear this remark, "My children always cut their teeth with diarrhœa or a large head," and the explanation of this he considered was to be found in improper feeding, an opinion which everyone who observes the folly of parents in this respect will be ready to endorse. They stuff their babies' stomachs with food which they cannot digest, and then declare that the diarrhœa and other disorders thus brought about are only due to teething. But surely teething is a natural process—not the efficient cause of the many disorders to which the susceptible infantile body is liable. No doubt when a gum is inflamed scarification would ease it, but when it is not this remedy is not indicated. One very significant suggestion was made by Mr. Owen, viz., to keep a sharp lookout for essential paralysis, which comes on so insidiously at a period when the symptoms are likely to be attributed to dentition. In the discussion which followed Dr. Clement Godson, Dr. Braxton Hicks, and Dr. C. J. Hare, as well as others, put in a plea for the "good remedy out of fashion," and Mr. H. Cartwright threw in his authority as a dentist in favor of the notion that diarrhœa and convulsions may be caused by dentition. The chief indication he assigned for the operation was a tense glistening state of the gum when the tooth was about to come forward, or greatly swollen or inflamed gums. Dr. W. A. Duncan had seen the operation relieve diarrhœa and convulsions; Dr. Ewart was a firm believer in the lancet; Dr. Drew thought it indicated in a febrile condition with pain in the gums lasting for two days, as well as in some cases of diarrhœa, bronchitis and otitis. Dr. S. Taylor would use it in a horny condition of the gums; and Dr. Webb had seen children on the point of death saved by it. On the other hand, Dr. Travers had not seen a single instance in which he felt justified in lancing the gums in the last nineteen years. Mr. Lowne said dentition was a physiological process and nine out of ten cases of diarrhœa were caused by improper feeding, and he could not understand how that complaint could be brought about reflexly by dentition. Dr. Sansom thought there was a liability to use the lancet too frequently. Dr. Hall thought it had fallen into disuse since the introduction of bromides, and some other speakers "damned with faint praise" the instrument with which most of them had probably in younger days tortured their little patients. In reporting so fully a discussion which some of your readers may perhaps think trivial, it may be right to add that this was one of the most interesting evenings of the session.

A case of myxœdema was brought forward at a recent meeting of the Clinical Society, which was interesting from a history of its commencement in a severe attack of hemorrhage and the continuance of a hemorrhagic tendency; besides which the patient suffered from occasional attacks of nervous restlessness, which are not only unusual but may almost be thought to be incompatible with myxœdema. A curious circumstance may also be added respecting treatment: the patient felt herself a good deal better while under half-drachm doses of tincture of jaborandi, and there was at the same time a great increase in the excretion of urea; but no other objective improvement.

In connection with the case above mentioned, attention was once more called to the effect of extirpation of the thyroid gland. It will be remembered that last year Dr. Kocher, of Berne, reported that he had observed after this operation, in a number of cases, the development of a cachexia closely resembling the condition of myxœdema; and a conjecture was ventured that this disease might represent in adult life the state of cretinism at an earlier period. Be that as it may, the number of Kocher's cases was sufficient to show that excision of the thyroid body is in some way related to the strumous cachexia he had described, although partial extirpation was followed by no such condition. The notion first put forward by Dr. Semon, that this state was connected with cretinism, received some confirmation from a case now reported by Professor Paul Bruns. His patient, now twenty-eight years old, had the thyroid removed eighteen years ago. In 1867, five months after the operation, his disposition had completely changed. From a bright, lively child he had become very retired and quiet, and he now is a dwarf and a cretin. After the operation the development of the trunk and limbs had ceased and only the head had grown to the size of manhood. The expression is that of an idiot, the skin and mucous membranes are pale. The whole integument is dry, brittle, and thickened by a peculiar soft gelatinous infiltration. There is also swelling of the tongue, palate, and tonsils, giving rise to slow, difficult speech. Sensibility and muscular power preserved, but the patient cannot work, can hardly walk fifty steps. His mental faculties are less developed than those of a boy of ten. This important case seems to furnish us with a blending of myxœdema and cretinism, and it was suggested that both conditions are due to the

loss of the thyroid gland. Certainly some of the other facts recorded point in the same direction, but they seem at present scarcely sufficient to establish so large a generalization, and in this case it would be easy to suggest another explanation.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from November 16 to November 22, 1884.

McKEE, JAMES C., Major and Surgeon. Leave of absence extended one month. S. O. 273, A. G. O., November 20, 1884.

GODDARD, C. E., Major and Surgeon. Assigned to duty at Fort Yates, D. T. S. O. 138, Department of Dakota, November 15, 1884.

COWDREY, S. G., Captain and Assistant Surgeon. Granted leave of absence for one month. S. O. 237, Department of the East, November 17, 1884.

HAVARD, VALERY, Captain and Assistant Surgeon. Granted leave of absence for four months, with permission to go beyond sea, to take effect when his services can be dispensed with at his present station. S. O. 268, A. G. O., November 14, 1884.

TAYLOR, A. W., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Omaha, Neb., and ordered for duty at Fort D. A. Russell, Wyo. T. S. O. 101, Department of the Platte, November 19, 1884.

PHILLIPS, JOHN L., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Keogh, M. T. S. O. 134, Department of Dakota, November 5, 1884.

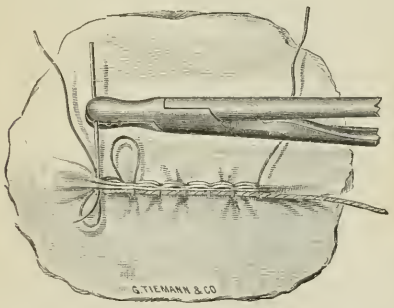
New Instruments.

A RAPID METHOD OF CONTINUOUS SUTURE.

By P. J. PRENDERGAST, M.D.,
BROOKLYN, N. Y.

AFTER having used the needle of Dr. Wackerhagen with great satisfaction for interrupted suture, I have found that it can also be used for the continuous suture, and that by a very rapid method, without utilizing the eye in the blunt end. The plan is as follows, viz.:

The thread having been passed under the bridge of the needle, each portion being of equal length, the



needle-holder is applied; the needle is then passed through the tissues and a loop of thread is drawn out, a piece of large size catgut is now passed through the loops by an assistant, each time the needle is withdrawn.

By this process we possess a double advantage—non-disturbance of the needle-holder, and one threading of needle for ordinary cases. I doubt not this needle will henceforth be used as frequently and satisfactorily for the continuous as for the interrupted suture.

A NEW ELECTRIC OTOSCOPE.

By ROSWELL PARK, M.D.,
BUFFALO, N. Y.

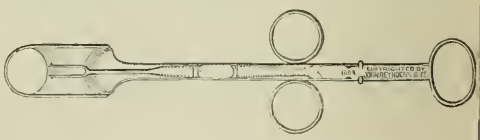
To those who have a means of supplying by some form of battery in their office an electric current of sufficient power, this little instrument will commend itself as a most convenient demonstrating otoscope, and one by which searching examinations can be made irrespective of time of day or light.

It consists of an otoscope of conventional pattern, much like Brunton's or Hasenstein's, from which the ordinary flaring, funnel-like side tube for collecting the rays of artificial light has been removed, and in its place a thimble inserted within which is the platinum coil made white hot by the passage of the current. The battery wires are connected with a perforated flange on either side the thimble, and a little knob to be pressed down by a finger of the hand which holds the instrument makes the connection in its interior, so that the light is under perfect control. Back of the coil is a dead white mirror

surface which serves to economize and intensify the light. The portion of the instrument corresponding to the ear-speculum proper is made in three sizes, and of polished metal, or of hard rubber, as may be desired. The thimble fits easily in its socket, and is turned half round as the instrument is changed from one ear to the other, so that the knob may, if desired, always have the same relative position. And when sunlight or artificial light from a lamp are wanted the thimble is entirely removed and the funnel-tube inserted. The battery used may be one of the little storage batteries accompanying Trouvé's "polyscope," a cautery battery, or any other supplying sufficient intensity.

MARCONI'S TONSILLITOME.

IN this instrument the Mackenzie blade is combined with Matthews' fork and handle, each of which are the



superior features in the respective instruments. The advantages of this instrument will readily appear to those within whose specialty of practice it falls.

A DENTIST at Triangle, N. Y., once received an order for a block of teeth, as follows: "My mouth is 3 inches acrost, $\frac{5}{8}$ inches through the jaw; sum humocky on the edge; shaped like a horse-shoe, toe forward. If you want me to be more particklar I shel hav to cum thar. Yours truly, ——."

The Medical Record

A Weekly Journal of Medicine and Surgery

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Original Articles.

CONCUSSION OF THE SPINE AND ITS RELATION TO NEURASTHENIA AND HYSTERIA.[1]

By C. L. DANA, A.M., M.D.,

PROFESSOR OF NERVOUS AND MENTAL DISEASES IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL.

THE physician who is called into court to testify in a case of spinal injury witnesses a curious spectacle. The lawyer for the prosecution waves before the jury a volume of "Erichsen upon Spinal Concussion." He reads to them, in impressive accents, the statement that every injury to the spine, however slight, is full of danger to the sufferer. He asks, with sonorous emphasis, if Mr. Erichsen is not a surgeon of world-wide fame; and if he does not say that slight injuries to the back may cause chronic spinal disease of the most serious character. He sneers at the work of a certain Mr. Page, who is known to be professedly only a railway surgeon. He shows that his client has paralysis, anæmia, meningitis, in fine, "spinal concussion."

On the other hand, the lawyer for the defence brandishes triumphantly a larger work, by Mr. Herbert Page, on "Injuries to the Spine;" he reads to the jury cases of malingering therein related, shows that Mr. Erichsen has for years made a business of being an expert for people with injured spines, but that he has never yet found a case that proved fatal. He quotes Mr. Page's two hundred and thirty four cases of spinal concussion, in most of which recovery resulted, and shows, through his medical expert, that the spinal cord is so admirably protected that it could never possibly be injured by anything so utterly trivial as a railway collision.

The medical experts themselves in these cases necessarily testify in the most diverse way, according to their natural bias or the particular surgical authority or pecuniary support upon which they rely. And authorities are so unsettled and contradictory, and symptomatological data so uncertain, that two medical men can with perfect honesty, if they go by written works, support quite opposite views.

It is on account of the existence of this uncertain state of written medical opinion that I venture to present the subject of spinal concussion now. I do not so much wish to offer any original views of my own, or detail my personal experience (which has been sufficient to show me in how unsatisfactory a state the subject of spinal concussion is), but rather to lay down the mooted questions regarding injuries to the spine and their sequelæ, to present what is in my opinion the just and proper view to take of them, and to ask for corroboration or criticism of my audience to-night.

Under the term concussion of the spine Mr. Erichsen includes four different conditions:

First.—Concussion of the spinal cord itself. Here a jar or shake of the cord disorders or suspends its functions without causing any detectable lesion.

Second.—Spinal hemorrhage and compression.

Third.—Acute and subacute inflammation of meninges and cord.

Fourth.—Chronic meningitis and myelitis, consequent upon simple concussions of the cord, apoplexies, or acute or subacute inflammations.

He describes as accompanying or following these injuries symptoms attributed to general nervous shock. These symptoms are those of cerebral irritability and asthenia, spinal anæmia and irritation, and a long series of visual troubles. Without going into any analysis I think I can say from a careful reading of his book that Mr. Erichsen's teachings and their implications are somewhat as follows:

That there is such a thing as concussion of the spinal cord, pure and simple, whereby the functions of the cord are temporarily suspended.

That such a concussion of the cord may be followed by recovery (and generally is), or by death or chronic disease.

That there is such a thing as concussion of the spine, wherein the whole vertebral column, with its envelopes and contents, is jarred or injured in various ways.

That this term, "concussion of the spine," is one of the widest inclusiveness, taking in symptoms of injury to the cord, of injury to the vertebral column and muscles, and of general nervous shock and its sequelæ.

That an injury to the spine or body may prove most serious (to the spine especially), and that even trivial injuries may cause grave organic disease of the cord or its membranes.

That spinal anæmia, spinal irritation, hysteria, and allied troubles may result from slight injuries to the spine, and the nervous shock of the accidents causing them.

That these last-mentioned symptoms, as well as those of a supposed chronic meningo-myelitis, may develop later, and slowly, after a period of comparative health, and that they are very serious in character.

That malingering occurs and should be looked out for.

That serious visual troubles occur.

I might add here that Mr. Erichsen reports in support of these views thirty-one cases in detail, of which nine were the result of railway accidents.

Turning now to Mr. Page's work, already referred to, it should be said in the beginning that it is by no means an aggressive criticism of Erichsen alone. The writer endeavors to produce a systematic treatise, and although he puts his arguments together badly, he has succeeded in making an original and valuable contribution to the subject in hand. It is true, however, that much space is devoted to pulling down some of the pathological creations of the London Hospital surgeon's fancy. Without attempting at all to analyze his book, I propose to set off the synopsis given of Mr. Erichsen's teachings by certain propositions, which I believe to embody the opinions of Mr. Page, and then to enumerate the mooted points between them. The views of Mr. Page, so far as I understand him, are:

That the existence of such a thing as concussion of the spinal cord, pure and simple, is unproven and extremely doubtful.

That the spinal cord cannot be directly contused or injured by shakes, blows, or violence to the body unless there is a fracture or dislocation of the spinal column.

[1] Read at a meeting of the New York Neurological Society, November 11, 1884. According to Poor (Railroad Manual, 1884), there are 289,190,783 passengers carried upon the 113,329 miles of road in the United States yearly in 1882). This is about six times the total population. For the Middle States the number of passengers is ten per cent. of the population, and for New York about fifty million. Among these fifty million there occurred in 1882–83, according to the Report of the New York Railway Commissioners, 40 deaths and 194 injuries. In addition to this there occurred to employés 175 deaths and 722 injuries, and to all others 280 deaths and 250 injuries, making the total casualty returns in this State for one year 495 deaths and 1,166 injuries. Calculating upon this basis, the number of deaths annually among railway passengers would be about 232, the number of injuries 1,125. For the whole country the total number of deaths would be not far from 2,871 among passengers, employés, and others, while the total number of injuries would be about 6,762.

That so-called cases of concussion of the cord, followed by softening and death, or by symptoms of myelitis, are cases of spinal apoplexy, or of dislocation or fracture with compression.

That the term concussion of the spine is arbitrary, vague, and misleading.

That injuries to the spine very rarely, if ever, produce chronic non-fatal forms of meningitis, myelitis, or meningo-myelitis, so called; but that the symptoms attributed to these conditions are the result of lumbago, strains, and ruptures of muscle and ligaments, injury to peripheral nerves, and general nervous shock, setting up neurasthenic and neuromimetic disorders.

That these neurasthenic and neuro-mimetic disorders, though often serious, are not fatal, but tend toward recovery; and that the patient and the litigation are often responsible for many of them.

That the symptoms being mostly subjective, it is difficult to exclude deception; that some unconscious deception often occurs, even with honest patients.

That no serious visual troubles follow in these chronic functional disorders.

The general tenor of Mr. Page's work is to the effect that the spinal cord is a very carefully protected and not easily injured organ. From a comparison of these views with those of Mr. Erichsen, we may learn what are the disputed points regarding the effects of injuries to the spine.

Put in the form of queries, they are as follows:

First.—Whether external violence can cause a simple concussion, and perhaps contusion of the cord, of a character analogous to concussion of the brain, or whether the cases heretofore so considered are really examples of spinal hemorrhage, or of dislocation, separation, or fracture with compression?

Second.—Whether external violence or jars can cause direct contusion of the cord, or produce a structural change that ends in softening, there being no lesion of the enveloping osseo-ligamentous parts?

Third.—Whether blows or jars, ever or often, set up a chronic meningo-myelitis or myelitis, no lesion of the spinal column being present?

It is to this last category that Mr. Erichsen relegates a large portion of his reported non-fatal cases of concussion of the spine, and we may put in here, therefore, the counter-query:

Whether in a very large number of cases of chronic nervous disturbance, following railway and other accidents, cases usually diagnosticated in a routine way as "concussion of the spine," or chronic meningo-myelitis, the disease is not really mental (neurasthenia, hysteria, hypochondriasis), or else partly mental and partly the result of injuries to the spinal muscles, ligaments, and nerves?

Fourth.—Finally, the question is raised, Whether serious organic visual troubles result from railway and other accidents in which the spine or body is injured, but not the eye directly?

Some of the foregoing queries have plainly a more scientific than practical interest. As to the first one, for example, that of the existence of a concussion of the spinal cord, pure and simple. We know that after violent blows or falls persons suffer from a temporary paraplegia. Whether this is due to a molecular disturbance of the tissue of the cord or to a spinal hemorrhage, the clinical facts are the same. But I believe that there is enough evidence to justify one in retaining the term "concussion of the cord," a term sanctioned by ancient authority and adopted by every surgical writer.

The evidence *pro* and *con*, collected by Erichsen, Page, and myself, is the following: Erb cites a case which he believes illustrates spinal concussion ("Ziemssen's Cyclopædia of Medicine," Art., Concussion of Spine), and guardedly admits its existence.[1]

[1] See bibliography.

Le Gros Clark also (op. cit.) thinks that the term concussion of the spinal cord, used analogously to concussion of the brain, is justifiable. He relates two cases apparently illustrating this, but admits later that there might be some organic lesion.

Shaw (op. cit.) cites a case where there was apparently simple concussion, but the patient died and the autopsy showed a hemorrhage in cord.

Dr. Abercrombie (op. cit.) relates the history of a case where a man was struck in the back with a rock and rendered paraplegic for several weeks; he ultimately recovered. Abercrombie's opinion, that there is a true simple concussion of the cord, is apparently based on this case, and on those of Boyer and Frank, to which authorities he refers.

Dr. T. Buzzard (*The Lancet*, 867, vol. i., pp. 389, 435, 509, 623) quotes a number of cases believed to illustrate concussion of the cord, taken from Dr. J. L. Casper's "Ueber des Verletzungen des Ruckenmarkes," 1823, Berlin. This author gives Frank's cases reported in his "Kleine Schriften," also one by Valsalva and other old authors.

Boyer (op. cit., p. 135) relates two cases. In one the patient was struck on the back, in the other he strained his back in a violent muscular exercise. Both became suddenly paraplegic, died in a few weeks, and upon autopsy no lesion of the cord was discoverable.

These cases are not conclusive, because no microscopical examination was made. In the second case there could not have possibly been any *concussion*, as the man was simply going through a difficult muscular exercise for the amusement of his friends.

Mayo (op. cit.) expresses the opinion that concussion of the spinal cord may cause complete suspension of its functions. His illustrative cases *may* be explained on the theory of a hemorrhage.

Syme ("Principles of Surgery," Third Edition, p. 433) states that the cord may have its functions suspended by a concussion, as does the brain. He states, however, that an effusion of blood or serum probably complicates these cases.

Dr. John A. Lidell (*American Journal of the Medical Sciences*, vol. xlviii., p. 305) expresses his belief in simple spinal cord concussion, and relates three cases illustrating it, as he believes. The paraplegia in these cases could be explained, however, by the injury to peripheral nerves or by hemorrhage.

Dr. S. Wilks ("Diseases of the Nervous System," p. 201) states that he has more than once seen a man receive a severe injury to the back, become paralyzed, and recover in a few days. Here he thinks the cord is stunned. He reports the case of a porter who received a severe blow on the head (?) and back. He was stunned for a time, but resumed work for three days, then developed paraplegia and died. Autopsy showed only a very slight granular and fatty change in the cord.

G. Fisher (*Deut. Zeitsch. Chir.*) cites the case of a man, aged twenty-one, who fell, striking on his back. There was complete paralysis of the extremities, trunk, and spinal centres. Death occurred. Post-mortem showed only a slight meningeal effusion. Paralysis was referred to shock.

I have taken the trouble to bring these cases together, adding a number not quoted by Erichsen or Page, because in the works of those authors the clinical and pathological evidence is not systematically arranged, and it is by no means easy in reading Mr. Page's book to follow his arguments and his evidence.

I. These cases may not of themselves positively prove the existence of a concussion of the cord. In view of the facts presented under the second query, however, showing that shakes and injuries can cause a softening of the cord, the certainty that it, in rare cases, can be "concussed," so as to suspend its functions, becomes very great.

II. As to whether jars and injuries to the spine can

cause direct structural change leading to softening of the cord, there being no lesion of the spinal column—

Sir Benjamin Brodie (op. cit.) first laid down the view that such a thing was possible. And though it is true that he cites no illustrative cases, yet he writes with a particularity which leads one to believe that he has seen such cases. As slightly confirmatory of this view also, Gull ("Guy's Hospital Reports," Series iii., 191, 1858, Case xxiii.) reports the case of a porter, who received a severe blow directly upon the cervical spine. There was paralysis of motion in the left arm, and of motion and sensation in legs. Post-mortem showed softening, with a slight ecchymosis in gray matter, and contusion of cord opposite fourth and fifth cervical vertebræ. The spine was normal, except for a separation of the bodies of the fourth and fifth cervical vertebræ.

The Lancet (April 19, 1877, p. 571) contains the report of the case of a Mr. John Jepson, who was bruised and shaken in a collision. He attended to his business for a fortnight. Symptoms of spinal concussion then set in: spinal tenderness, muscular twitchings, paraplegia, mental symptoms. In six months he died of pneumonia. Post-mortem showed considerable softening in the dorsal portion of the cord.

Mr. Curling ("Transactions of Pathological Society," vol. viii.) records the case of a boy, aged eight, who fell, striking on the buttocks, became paraplegic, and died in three months and a half. Post-mortem showed cord softened in several places.

Dr. Lochner, of Schwalbach (*Aertzliches Intelligenzblatt*, October 19, 1875), reports two cases of softening of the cord following a blow or fall, no lesion of the spinal column being found. Dr. Abercrombie also cites a similar case (op. cit., p. 343).

III. As to whether injuries to the spine, shakes, and jars can cause a subacute or chronic myelitis or meningomyelitis, the spinal column not being injured. Undoubtedly some such cases do exist. In judging of this question, however, it is well to bear in mind that chronic myelitis and meningitis are serious, and eventually fatal, diseases. Therefore, if railway and other accidents produced them, pathologists would see them.

Mr. Page collects the histories of only two. One was reported by Mr. Hutchinson (*Medical Times and Gazette*, 1879, vol. i., p. 348). It was a case of paraplegia from myelitis following injury to the back. The patient recovered. The girl had a typical acute myelitis of the lower part of the cord. She had had inherited syphilis.

A second case was that of concussion-lesion, with myelitis and secondary degeneration, reported by Dr. Bastian ("Transactions of the Royal Medical and Chirurgical Society," June 25, 1867, vol. l.). Here the patient died, and a rupture of the cord in the cervical enlargement was found to have been the starting-point of the disease. Mr. Page considers this case unique.

I have under treatment now a patient suffering from transverse myelitis and descending degeneration, of whom the history is very similar to that of Bastian's. Before reading Mr. Page's comments, I came across Bastian's case, and was so struck with its clinical resemblance to my own that I referred to it in exhibiting the patient to my class at the New York Post-Graduate School.

Dr. Edes reports (quoted in Hamilton's "Medical Jurisprudence," p. 357) four cases of postero-lateral sclerosis, the result of spinal concussion.

Petit, in his work upon the "Relation of Locomotor Ataxia and Traumatism," shows that the injuries and accidents may at least develop tabes in the predisposed.

Althaus in his recent work on "Scleroses of the Cord" states the same.

It seems to me to be proven beyond a doubt, despite Mr. Page's arguments, that external violence and jars, apart from any hemorrhage or other lesion, may cause an acute, subacute, or a chronic myelitis, with softening or secondary degenerations. Not many of these cases have yet been reported, because they are rare and because there is not yet a widely diffused knowledge of the methods by which the different forms of chronic myelitis are diagnosticated. And it ought perhaps to be added that a certain predisposition, syphilitic or neurotic, is necessary for the development by traumatism of most of these forms.

But it is claimed not only that myelitis, but that a chronic meningitis or meningo-myelitis may be set up by concussions of the cord. It is to this pathological class that Mr. Erichsen relegates a very large part of his reported cases. In doing this he had undoubtedly given a more serious aspect to many of these cases than they deserved. Meningitis and myelitis are, as we have stated, serious diseases, yet the cases Mr. Erichsen describes do not die.

I fully agree with Mr. Page that a large proportion of these cases, when analyzed, can be shown to be cases of strain or rupture of muscular and ligamentous structures, injury to nerves, or the results of a general nervous shock, and that the spinal cord has no more to do with the disease than the stomach.

I hesitate to say, however, that Mr. Erichsen is entirely wrong in his pathology, or that there is not set up in some of these cases a low grade of meningeal inflammation or congestion; or even if there be not, as in the case of Mr. Jepson, patches of softening.

This is certain, however, that heretofore too little stress has been laid upon the symptoms produced by neuritis, strains, and general nervous shock.

Regarding these points some illustrative cases other than those quoted by Erichsen and Page may be found, Leyden (*Archiv f. Psychiatr.*, 1878, viii., p. 31, quoted by Hamilton) reports a case in which a patient suffered from peripachymeningitis and compressive myelitis ending in death.

I have reported a case of cervical pachymeningitis in a syphilitic where the disease was undoubtedly started up by a severe blow on the neck (*Journal of Nervous and Mental Diseases*, January, 1882).

Dr. Allan McLane Hamilton reports a case ("Medical Jurisprudence," p. 355, New York, 1883) in which he states that there was undoubtedly "serious organic change in the brain and cord" as the result of spinal concussion.

IV. As to the visual troubles, I doubt very much if the chronic functional disturbances we have been speaking of can ever produce any real organic trouble with vision.

Albutt, I believe, speaks of a chronic meningeal irritation, which gradually creeps up from the cord to the brain, and finally affects, by contiguity, the eye. I believe, however, that there may be asthenopia, restricted vision, hysterical disturbances of same, vascular changes in the disc, but nothing else, unless organic disease of the cord or brain sets in. Dr. J. G. Johnson gives a valuable summary of evidence on this point. *Vide* bibliography.

Turning now to a discussion of the more practical and important features in so-called spinal concussion, I would state that without doubt in the largest class of troubles resulting from accident and injury to the spine, the main source of the symptoms is a general functional nervous disturbance.

The fright, excitement, and more or less severe bodily injury produce often a profound shock. From this the nervous system gradually emerges into a state that may be broadly characterized as one of asthenia, morbid irritability, and defective inhibition. The patient then furnishes a clinical picture familiar to all.

Sleeplessness, irritability, states of depression, defective memory, inability to do mental or physical work, headache, tinnitus, nervousness, vaso-motor disturbances, excessive sweating, asthenopia, large pupils, spinal pain and tenderness, muscular weakness, tremor and twitchings, and irregular pulse, are the ordinary symptoms. Sometimes pronounced neuromimetic disorders develop. The patient shows the symptoms of so-called spinal anæmia, or of spinal irritation, or he develops paralyses

hemianæsthesia, and various hysterical phenomena. In nearly all cases these symptoms are subjective. They correspond with those of neurasthenia, as described by Beard, Mitchell, Erb, Möbius, and Dowse, or with those of the convalescent stage of cerebral concussion, as described by Hutchinson; they are included under the neuromimetic disorders of Paget, and they have been aptly termed railway hysteria and hypochondriasis by Dr. Allan McLane Hamilton.

It is these cases which form the most puzzling problems for the physician, and which cause him the greatest trouble, perhaps bring him into greatest reproach before the court.

This is due partly to the incompletely developed views, to speak mildly, promulgated of late years regarding the nature of spinal injuries, and partly to the natural and inherent difficulties of the subject. As to the first point, the spinal column has been held up as the most delicate, responsive, and hyperæsthetic of all organs. It has been made the focus for every jar, bruise, or shock to centre upon, and "concussion of the spine" has been the shibboleth of every frightened passenger and prosecuting attorney for twenty years. As Holmes once said regarding Bishop Berkeley and his belief in the universal efficacy of tar-water: "Berkeley believed that the whole material universe was nothing, and that tar-water was everything," so in a measure the spinal cord has been looked upon as everything—brain, muscle, ligament, and nerve as nothing.

Not long ago, through the kindness of my friend Dr. George E. Munroe, I was called to see three women who all had very nearly similar symptoms, viz.: mentally they were profoundly emotional and hysterical, physically they were paraplegic, or nearly so, and suffered from sensitive spines. In two the spinal pain and tenderness were so very marked that the diagnosis of spinal irritation was made; the third patient had what was termed spinal anæmia. This last patient only was in a railway collision, and received a slight jar, but no serious physical injury. The other two received severe blows on the head, causing concussion of the brain. Thus the fright of a collision in one case produced a similar state to that caused by the blows on the head in the other two. But only the patient who was in the railway accident was thought to have "concussion of the spine."

It may be laid down as absolutely established now, that railway accidents produce severe shocks to the nervous system which make persons neurasthenic or hysterical, oftener the former. This condition is a real pathological one, and the sufferers are unquestionably sometimes as much injured as if they had had a broken arm or leg, or an actual injury of the cord. The practical trouble is in determining how ill such people are, how much they are malingering, how much the prospect of heavy damages unconsciously or consciously affects their symptoms, how much predisposed to disease they were before the accident. For a road should not be called to account because it does not provide perfectly for the crippled, the paralytic, and the valetudinarian.

In illustration of these difficulties my learned friend Dr. Allan McLane Hamilton records, in his valuable work on "Medical Jurisprudence," the history of a patient of mine (whom he examined for a railroad company), and adds this terminal comment: "This man is an undoubted malingerer." In opposition to this view, I have for the three years since his accident thought him to have been made by it a nuisance to his family and a burden to himself on account of his change of disposition, lessened capacity to work, and sciatic pains. If ever I attain a position which will justify me in writing a medico-legal treatise, I shall record the same case and say that this man was undoubtedly a case of traumatic neurasthenia complicated with neuritis. But who is ever to decide whether my book will be right, or Dr. Hamilton's?

It will be seen that it is an important matter to understand and extend the means of diagnosing these conditions where nearly every symptom is subjective. Into the discussion of this I cannot enter, but would call attention to the occasional evidence of hemianæsthesia of the body and of the special senses as a sign of hysteria. Drs. G. L. Walton and J. J. Putnam have especially drawn attention to these signs, and to the occasional very great value of the tuning-fork, æsthesiometer, and visual tests.

The use of electricity in testing muscular and nerve irritability and degeneration when carefully applied is of the greatest value. At the last meeting of the American Neurological Association, I suggested that the test of diminished or increased electrical resistance in affected limbs might be of value in some cases. In one case in which I tried it, the alleged lame and injured limb showed slight diminished electrical irritability, and increased electrical resistance on two successive trials on different days.

The matter of prognosis, also, calls for more accurate determination. Mr. Page is inclined to take a rose-colored view of the prognosis in these cases. He thinks that a large majority recover, and that nearly all tend to recovery. He does not seem to have met cases like those of Buzzard,[1] or where any organic disease finally set in, as in Edes' cases, Petit's, and my own. He never has met any serious results to vision, as have Wharton, Jones, and Erichsen.

His views are rather too hopeful, and decidedly are not always borne out by his own notes. "Patient improving at last accounts," is a formula given, but it may mean very little after all. Traumatic neurasthenia, or railway hysteria, is generally recovered from in a great measure. In my experience traumatic neurasthenia is the most amenable form to treatment. But it is very often the case that the man who has had a severe nervous shock is never entirely the same that he was before. This is particularly the case if he has reached middle life, or is of a neuropathic constitution. The very old and the very young seem to suffer less.[2]

The object of my paper has been to show:

1. That the term spinal concussion is a misleading, and often incorrect one, and that the symptoms which are usually associated with that name are really symptoms of traumatic neurasthenia,[3] hysteria, and hypochondriasis, associated, more or less, with symptoms of injury to the vertebral ligaments and muscles, and to the spinal nerves; that, in other words, spinal concussion is mental shock and physical bruising.

2. That this traumatic neurasthenia is in a measure a real disease, though it is very hard to say how much is real and how much the patient puts on.

3. That it may be, and often is, simulated, and that it requires the greatest care to detect skilled impostors.

4. That we need more objective tests for the purpose of determining the existence of these subjective neuroses.

5. That the prognosis of railway or traumatic neurasthenia and hysteria is very good so far as steady improvement is concerned, not so good as regards complete recovery.

6. That concussion of the spinal *cord* alone, followed by temporary loss of function, or by myelitis, does occur in rare instances.

7. That, in the predisposed at least, injuries and jars may set up chronic myelitis, without there being a lesion of the spinal column.

8. That Mr. Erichsen has in his book on "Spinal

[1] Nearly twenty years ago, Dr. T. Buzzard (Lancet, 1865 and 1867, loc. cit.) investigated the after-histories of eight cases of cerebral and spinal concussion. Two to four years later, none were found well, and one had died of phthisis. The same author cites cases apparently showing that spinal concussion may develop pneumonia, phthisis, imbecility, convulsions, diabetes, aneurism. In his cases, however, there seems to have been an element of brain injury.

Moeli (Archiv f. Psych) relates the history of four cases of railway injury followed by mental disturbances.

[2] It would be interesting to learn of the cures which railway and other accidents sometimes bring about. See H. Tuke's work on Body and Mind.

[3] The term "traumatic neurasthenia" covers a well-recognized symptom-complex which, in some cases, includes a lithæmic condition produced by active, healthy persons being suddenly obliged to lead a sedentary life.

Concussion" erroneously attributed functional troubles to the results of organic spinal disease.

9. That Mr. Erichsen's book on "Spinal Concussion" has a strong tendency erroneously to attribute to a shaking of the spine and a supposed ensuing meningitis, symptoms really due to mental shock, peripheral injury, or malingering.

Nature of injury.	Pathological change produced.	Symptoms.	Result.
Severe blow, fall, or shake.	Fracture or dislocation of vertebræ; compression or crush of cord; perhaps a hemorrhage in spinal cord or canal.	Immediate paralysis or paresis of limbs and spinal centres; anæsthesia; reflexes abolished.	Death occurring soon. Slow improvement, with symptoms of severe organic disease.
Severe blow, fall, or shake.	True concussion of spine (very rare); spinal contusion (very rare); spinal hemorrhage (not uncommon). With above are some injuries to ligaments and muscle, perhaps concealed fracture or dislocation; injury of nerves.	Temporary paresis or paralysis lasting one to six weeks; gradual recovery, spinal pains, symptoms of nervous shock.	Steady improvement and gradual recovery (the rule). With or without a preliminary period of comparative health or temporary improvement, symptoms of traumatic neurasthenia, hysteria (less often), or hypochondriasis, litigation symptoms appear (improvement and cure the rule). In very rare cases meningo-myelitis, insanity, epilepsy, inebriety, diabetes result.
Slight blow, fall, or shake.	More or less bruising, strain, or rupture of muscle and ligaments; some injury of nerves.	Sometimes a temporary paralysis (psychical); symptoms of general nervous shock or of concussion of brain; pains, stiffness, impaired gait.	After a period of comparative health symptoms of chronic meningitis or of chronic myelitis (tabes, lateral sclerosis) develop (very rare and only in the predisposed), traumatic hysteria, or neurasthenia. Gradual improvement the rule, and perfect cure the exception.

NITRITE OF AMYL AND ABORTION.—Dr. Samuel W. Francis reports that, having occasion to use a three-drop pearl of nitrite of amyl to restore a feeble patient, a young woman in attendance—and who, unknown to him, had been pregnant some six months—was so seriously affected by the vapor that she had to leave the room; and for several hours it was feared that she would abort. The doctor adds: "Might it not be well, under these circumstances, to study the action of nitrite of amyl as to its influence on the parturient female?"

LEAD-POISONING.[1]

BY R. CHANNING M. PAGE, M.D.,

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PAROXYSMS of abdominal pain and obstinate constipation are the prominent symptoms of what is commonly called lead colic.

It is unnecessary to mention the many other well-known names that have been applied to this condition. Sometimes, however, it is called Madrid colic, but according to Larry that complaint is due to atmospheric vicissitudes and acid beverages, and not to lead-poisoning. The same may be said of the so-called West India colic, if we are to believe Drs. Chisholm and Thomson, who resided long in the West Indies. The symptoms of lead colic had been described from early times, but the real cause was unknown up to the time of Stockhausen, of Prussia, who first suggested it in a treatise published in 1656. Afterward Henkel first proved by actual experiment that lead and its compounds are the sole substances which produce lead colic.[2]

The etiology of the disease, as is well known, is the introduction into the system of lead in some form, either through the skin, the air-passages, or the stomach. The various ways in which people become poisoned with lead are well known, and need not be stated here. Suffice it to say that painters who work inside (dryers) are affected far more frequently than others. This is partly because they are compelled to work with doors and windows closed at all seasons of the year, and partly, I think, because the paint they use is mixed with turpentine, which is a highly volatile substance. Outside painters, on the contrary, not only have abundant ventilation, but the paint they use is mixed with a fixed oil.

A person once attacked is more liable to a recurrence of the disease, however thoroughly he may have been cured before resuming his occupation.

Men are much more frequently attacked than women, for the obvious reason that they are much more frequently exposed to the cause. The season of the year does not appear to have any influence in producing the disease. During the month of February, 1881, I had more cases to apply to me for treatment than at any previous time, and I began to think that perhaps in cold weather it might occur more frequently, but I have since noticed that fully as many are affected in warm weather. Inside painters have told me that they suffer more in summer than winter, as they work with doors and windows closed at all seasons. Vegetation suffers near lead furnaces, and cattle and hogs in the neighborhood die from lead-poisoning.[3]

The symptoms of lead colic are so well known that I need not repeat them all here, and the diagnosis is not difficult. Abdominal pain and obstinate constipation, as already stated, are the prominent features of an attack. The pain is sometimes intermittent; at others it is never entirely absent, but exacerbates and remits, so to speak. The obstinate constipation is owing to an entirely different cause from that which produces the general costiveness incident to lead-poisoning. The former is due to the pain, as we shall presently endeavor to describe, and sometimes fails to be overcome by drastic cathartics; the latter is associated with the condition of general bad health that has been brought about, and often yields to the ordinary laxatives.

Unless the patient is completely cured, and especially if he continues to be exposed to the influence of the poison, chronic symptoms appear sooner or later. Besides a condition of general bad health there is now paralysis of the extensor muscles of the forearm, causing what is commonly called drop-wrist. In some cases, as among miners, inside painters, and others who are ex-

[1] Read before the Northwestern Medical and Surgical Society, New York, November 26, 1884.

[2] L. Tanquerel des Planches: Lead Diseases, by Dana, p. 34. 1848.

[3] Wilson: Monthly Journal of Medical Science, Edinburgh, May, 1852.

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osed to the vapors of lead, tremors are developed resembling paralysis agitans. In other cases arthralgia occurs, so that the patient imagines that he has rheumatism of the joints. These cases appear to be comparatively rare, however, since of twenty-six cases that applied to me for treatment at the Northwestern Dispensary, in this city, only two had tremor, and that of the upper extremities, and one had arthralgia. In all three cases the lead cachexia was well marked. I have had as yet but little experience with lead encephalopathy. The so-called *blue line* along the gums was first mentioned by Dr. Henry Burton, of London, in 1840.[1] Since then this sign has been insisted upon by nearly all authors on the subject as diagnostic. It is said to be due to the chemical action on lead of sulphuretted hydrogen generated about unclean teeth. For although the sulphide (sulphuret) of lead is black, under certain conditions it may, so far as I know, appear blue. Niemeyer, however, does not mention any blue line at all, but says [2] that "the gums are dark, almost slate-gray, the teeth themselves being discolored," a condition that may evidently exist without lead-poisoning. Flint [3] says truthfully that the blue line is not constant, and does not occur where the teeth are missing. Taylor [4] says that mercury and the salts of silver produce this blue line, and that in certain cases of chronic lead-poisoning it may be absent. All the blue line I ever found existed as frequently without lead-poisoning as with it. Bad and unclean teeth, I am inclined to think, will produce this so-called blue line along the gums independently of lead-poisoning. Even if it can be due to this cause, it would probably be absent in cases so slightly affected as to give rise to any doubt in the diagnosis. Beyond being an occasional clinical curiosity, therefore, even if it be that, it appears to be of little or no importance.

The duration of an attack of lead colic varies in different cases and the way in which it is treated. Thus under proper treatment it may last only a few hours or days at most, whereas if let alone, or in those cases where the patient seeks the advice of a druggist and undertakes his own treatment, an attack may last in varying degree of intensity for a week, or even indefinitely. The symptoms of chronic lead-poisoning, on the contrary, even under the best treatment, may continue for weeks and sometimes months. I once treated a patient with drop-wrist steadily for five months before he was cured. In other cases, undoubtedly, the duration is much longer, especially if the patient continues to be exposed to the poison.

The prognosis is nearly always favorable except in those chronic cases where general tremor has resulted, or where some grave complication has arisen. Thus it is said that a patient may die of apoplexy, or in an epileptic convulsion, during an attack of lead colic, or from supervening inflammation in some of the abdominal viscera, although I have never seen any of these cases. As the disease becomes chronic, defective nutrition, general emaciation, and chronic nephritis with a fatal result may occur.

The pathology of lead-poisoning may be said to be yet a subject for dispute. It is quite probable, however, that the motor cells of the anterior horns of the gray substance of the spinal cord are primarily affected.[5] We know that strychnine exalts the functions of these cells, and it appears that lead, on the contrary, in poisonous doses, depresses them. The muscles become affected accordingly. Thus in certain cases there is paralysis of the extensor muscles of the forearm, causing the characteristic drop-wrist. They naturally yield first, being weaker than the flexors. Subsequently, however, the paralysis may extend to other muscles of the body, including flexors also. Hence in some chronic cases we not only find drop-wrist, but also atrophy of the flexor muscles of the thenar eminences. There is reason to believe that all the voluntary muscles may become more or less affected as the disease progresses, only it is more noticeable in the extensors. However this may be, I believe with Romberg that the paroxysms of abdominal pain are neuralgic in character. Constipation cannot account for it, since a patient may be as regular in his bowels up to the time of an attack of lead colic as could be expected in one who was already in a state of general bad health, and whose intestinal mucous membrane was under the astringent influence of lead, if it had any. The attack once commenced, however, the bowels become markedly constipated, and as the pain increases in severity the more obstinate is the constipation. The reason of this is obvious. For as in pleurodynia, sciatica, and similar painful affections muscular movements become limited, so does intestinal neuralgia lessen peristaltic action. If the pain be very severe, as in some cases, peristaltic action is lost altogether, so that the bowels become absolutely motionless. Hence the obstinate constipation. To give drastic cathartics in such cases, therefore, without some anodyne, either in combination or previously administered, under the idea that moving the bowels will cure the pain, only aggravates the latter, and is unscientific practice. Just the reverse of this is the truth. Allay the pain and the bowels will often move without a cathartic. I usually give the two combined, however, as will presently be described.

It is clear that this temporary condition of obstinate constipation is not due to lead paralysis and atrophy of the muscular coat of the intestines, otherwise it would be more permanent. On the contrary there are cases with complete drop-wrist whose bowels are perfectly regular.

Neither can pain be due to inflammation of the intestinal mucous membrane, or to spasm of the muscular coat of the bowels, otherwise, instead of obstinate constipation there should be diarrhœa or dysentery. Moreover, in those cases where post-mortem examination has been made, no trace of inflammation was usually found, and it is hardly possible for muscular spasm to continue without interruption for a week, as lead colic sometimes does. Collections of gas in the intestines cannot account for the pain, since they are not always noticeably present, nor is relief usually accompanied by marked escape of flatus, as in wind colic.

In regard to treatment, prophylaxis by avoiding exposure to the cause as far as practicable is of the first importance. Milk, as recommended by some, is a prophylactic so far as it is an article of nourishment. For that reason it is better than dilute sulphuric acid, which is of no value and is fit only for washing the hands. It was first introduced by Gendrin, in imitation somewhat of the alum treatment originated by Grashuis, on the theory that it would produce in the system the insoluble sulphate of lead, which was supposed to be inert. Clinical observation, however, disproves this theory. The judicious use of iodide of potassium, producing in the system the soluble iodide of lead, which is readily eliminated, would, I think, be a much better plan. Should lead colic occur, however, the immediate indications are, obviously, to allay pain and, on general principles, to evacuate the bowels. Perhaps the best and simplest method of treating lead colic is to give a hypodermic injection of morphine, repeating it if necessary, and let the bowels take care of themselves. "The employment of cathartics," says Professor Flint,[1] "may be useful in removing lead contained in the contents of the alimentary canal. Aside from this object, and avoiding inconveniences from constipation, cathartics are not indicated." A free stool, however, would have a good moral effect on the patient, who is apt to regard the constipation as the sole cause of his trouble. And as it will be necessary

[1] Medical Gazette, London, vol. xxv., p. 687.
[2] Practice, seventh American, from the eighth German edition, vol. i., p. 619. 1880.
[3] Ibid., fifth edition, p. 543. 1884.
[4] Poisons, p. 400. 1875.
[5] Functions of the Spinal Cord, by M. Allen Starr, A.M., M.D.: American Journal of Neurology and Psychiatry for August and November, 1884.

[1] Op. cit., p. 543.

to regulate the bowels in order to facilitate the elimination of the poison from the system while improving the patient's general condition, it is just as well to begin at once.

Many so-called remedies have been used in the treatment of this disease, including, of course, mercury and even general blood-letting. In 1752 Grashuis, a Dutch physician, conceived the idea that alum (sulphate of alum and potash, or ammonia) would be a good remedy in this disease on account of the sulphuric acid in it, which he supposed would combine with the lead and render the latter inert. This plan has since been followed by various physicians, and even at this time it is mentioned by some authors as a specific in this disease. For instance, Bartholow[1] says: "For the treatment of the colic of some cachexiæ the appropriate remedy for the cachexia will be necessary: for example, quinia in intermittent colic, iodide of potassium in nocturnal colic, and alum in lead colic." Usually about a drachm is given four times daily in water, and in about one week or more the patient may get better or not, which he generally does anyhow. A more preposterous plan of treatment cannot well be imagined. The same may be said of Epsom salts (sulphate of magnesia), which is undoubtedly an imitation of the alum treatment. The fact that Epsom salts contain sulphuric acid does not make it preferable as a saline cathartic in this disease to Rochelle salts. Both alum and salts frequently irritate the stomach, and the former not infrequently produces vomiting.

Instead of losing time with such doubtful, if not injurious means, I have used, with nearly invariable success, a combination of croton-oil and morphine in pill form, as has been suggested by various authors. I have usually ordered one to two drops of croton oil and one grain of morphine rubbed up with a sufficient quantity of extract hyoscyamus (or some inert extract), to be divided into three pills, one of which is to be taken every two hours until pain is allayed and the bowels move. Loomis[2] uses, in addition to croton oil and morphine, one sixth grain extract belladonna in each pill. The croton oil is ready to act about the time that the patient is getting relief from pain by the influence of the morphine, and both indications are thus met at the same time. There are other cathartics that might answer the same purpose if given with opium, but I have always found these pills to be of a very convenient form for administration, and they do not irritate the stomach. They are as certain a remedy for lead colic as quinine is for intermittent fever, and should be freshly made up. One or two are generally sufficient, and rarely have I found it necessary to give the third. Of course if the case requires it a hypodermic injection of morphine may be given at once, as has already been said. I have never had occasion to use it. I do not think that it would interfere with the early movement of the bowels, and if it did I do not believe that it would make any difference. Niemeyer[3] says that "there is no remedy more successful than opium in relieving the constipation of lead colic." A painter once informed me that whenever he found obstinate constipation and colicky pains coming on he would take thirty drops of laudanum. In this way he not only allayed pain, but soon had a copious evacuation from the bowels. By leaving off work for a couple of weeks he was ready to begin again. In that way he said he "kept out of the hands of the doctors."

The treatment should not end with curing an attack of lead colic, however, especially if the patient goes back to his occupation. The poison must be eliminated from the system, otherwise symptoms of chronic lead-poisoning will appear in time, if indeed they have not already commenced.

For eliminating the poison the only proper remedy is the iodide of potassium. This drug was recommended for the first time in this disease by Melsens, of Paris, in 1849. By chemical action it produces the soluble iodide of lead in the system, as already stated, and its undoubted efficacy is proved by the well-known fact that it causes lead to appear in the patient's urine.[1] I always give the iodide in ten-grain doses three times daily, and have never found it necessary to give it in larger doses. The question arises, How long should this remedy be continued? Where the case is not of long standing, and where paralysis has not occurred, I believe that six weeks is enough—it being understood that meantime the general health must be attended to, and that the patient does not continue to be exposed to the poison. For this reason he should at once leave off work and endeavor to find some other employment for the time. But where drop-wrist has occurred, I have kept up this treatment steadily for three months. Even in the worst cases I have never had occasion to use the iodide any longer than that if the patient obeyed instructions and took it steadily. I prefer to discontinue it then and put the patient on bark and iron. If necessary, however, the iodide may be continued for a longer period and in larger doses. I have never tried the sulphur baths and have never found them necessary.

Iodide of potassium eliminates lead from the system, but it does not restore the paralyzed and atrophied muscles to their normal condition. For this purpose electricity is the proper remedy, although dry-rubbing and otherwise stimulating the muscles meantime should be practised. At no time during treatment is the induced (faradic, which is subdivided into primary and secondary) current to be preferred to the constant (galvanic, continuous) current. At first the former is usually of no benefit, since in many cases it fails to cause the affected muscles to contract. In marked cases, where all other methods of applying electricity fail, *the interrupted constant current should be used, and if necessary the poles should be changed.* After considerable improvement has taken place the constant current without the interruptions may be used. The strength of the current should be about fifteen to twenty cells, according to circumstances.[2] If the interrupted constant current be used, the number of interruptions should be about six times a minute. Placing the negative pole over the musculo-spiral nerve in the arm (middle cervical vertebra—De Watteville) and the positive pole successively over the motor points (bellies) of the affected muscles of the forearm, the constant current, interrupted or not as the case requires, should be used for about two minutes for each muscle. As the case improves sufficiently the induced may be substituted for the constant current, although I have never seen any benefit derived from the change. The applications of electricity should be repeated three times a week (every other day) until a complete cure is effected.

If the interrupted constant current fails to cause the affected muscles to contract at first, even though the poles be changed, the prognosis is less favorable. Such cases appear to be rare, but even then a complete cure is not to be despaired of without further trial. The applications of electricity should be repeated. At the same time the iodide of potassium should be systematically administered with a view to eliminating the poison, and the general health should be attended to. If then the interrupted constant current failed to cause the muscles to contract, the case might be regarded as hopeless.

Of the twenty-six cases mentioned, only four had anything like a blue line along the gums. Dr. J. C. Mackenzie, of this city, saw most of these cases with me. I do not attribute the discoloration in those four cases to the sulphide of lead. One had lead tremor of the upper extremities. I only saw him once. There were seven who applied while they had lead colic, and they all recovered without difficulty. There were eighteen with lead paralysis to a greater or less extent. Of these two were affected only in the left hand, five in the right,

[1] Practice, fifth edition, p. 108. 1883. [2] Ibid., first edition, p. 320. 1884.
[3] Op. cit., p. 621.

[1] Flint, op. cit., p. 544.
[2] De Watteville: Medical Electricity, second edition, p. 187. 1884.

and eleven had complete double drop-wrist. In those cases where one hand only was affected the paralysis was not so marked as in the cases of double drop-wrist, and in one case the index and middle fingers of the right hand were only affected, the former much more markedly. Of the eleven that had complete double drop-wrist, two were sent to hospital, not having sufficient means to be treated outside. One of these had tremor of the hands and atrophy of the thenar eminences. Of the remaining nine with double drop-wrist, eight were cured without difficulty, but in one case the interrupted constant current failed at first to cause the affected muscles of the right hand to contract. After three weeks' systematic administration of iodide of potassium and repeated applications of electricity they began to respond. The muscles of the left hand responded from the first. There was marked double drop-wrist and the muscles of the thenar and hypothenar eminences were much atrophied. This patient completely recovered after five months' treatment. Eight of the eleven cases having double drop-wrist stated that they noticed that the right hand began to weaken first, and generally attributed it to getting turpentine on that hand, while three did not remember which hand was affected first. Of seventeen cases of lead-poisoning during the past year reported to me by Dr. Edwin E. Swift, through the courtesy of Professor E. C. Seguin, of the Department for Nervous Diseases, Manhattan Eye and Ear Hospital, in this city, six had the so-called blue line along the gums; none were affected in the right or left hand alone; seven were not affected with paralysis; and ten were affected in both hands. Of these, four are reported as having had paralysis to commence first in the right hand and six doubtful. Adding these ten to my eighteen, we have twenty-eight cases of lead paralysis. Of these, seventeen were first affected in the right hand, two in the left, and nine were doubtful. Twenty-one cases were affected in both hands, and the remaining seven would doubtless have become so in time if they had not applied for treatment. In a total of forty-three cases there was a so-called blue line along the gums in ten, and none in thirty-three; a result likely to be found in an eqnal number of laboring people who had never been exposed to the influence of lead-poisoning.

I do not believe that there was any local effect of the poison on one hand in preference to the other. It may have been accidental that more were affected in the right hand than the left in the above-mentioned cases. Or it may be that most of them, being right-handed, merely noticed it in the right hand first, though it may have existed to some degree in the left hand also. For the same reason, left-handed people might be likely to notice it first in the left hand.

31 West Thirty-third Street, November 26, 1884.

A Reminiscence of the International Medical Congress.—On the first day of the great gathering, while the different nationalities were flocking into the University porch, they encountered on the steps a porter distributing small rectangular cards, the size and shape of book-markers. These were received by the English and Americans with an amount of laughter and merriment utterly unintelligible to their colleagues of the European continent. On these cards were printed the following:

W. C. Stinck's,
Bog Papir og Kunsthandel,
Amagertow 33,
Kjöbenhavn.

Translated into what Mark Twain calls "a language a Christian can understand," this announcement is a very prosaic one. The first line is the respectable shopkeeper's name, which in Danish has not its English meaning. The remainder is simply "Dealer in Books, Stationery, and Art, 33 Amager Market, Copenhagen."—*Med. Press.*

VOMITING IN PREGNANCY.

By W. GILL WYLIE, M.D.,

Professor of Gynecology in the New York Polyclinic, and Gynecologist to Believue Hospital, New York.

In the spring of 1879 I was studying diseases of the cervix uteri in preparing a paper upon "Laceration of the Cervix Uteri," and I came across Dr. Edward Copeman's paper in the *British Medical Journal* of May 15, 1878, on "Dilatation of the Os Uteri for Vomiting in Pregnancy." About this time I had two cases of vomiting with pregnancy, and had tried many drugs with poor success. One of these was a multipara, and I had very little trouble in introducing the index finger of my left hand into the os uteri up to the first joint, and it gave complete relief. The other patient was a primapara that I had treated for retroversion, and had become pregnant while wearing the pessary. Notwithstanding that the uterus was held in good position, the vomiting was very severe. The cervix was pointed, hard, and had a slight erosion of mucous membrane around the os. Without using great force I found that I could not pass my finger. I put her in Sims' position and with a uterine dilator opened the cervix by gradually dilating it for a half inch or more. There was slight pain and a little bleeding, but no real disturbance. The vomiting was somewhat relieved, but not cured. After an interval of four days I dilated the cervix again, going pretty well up to the os internum with the point of the dilator. After this the vomiting ceased. In the fall of the same year a case very similar to the latter came under my care; when I examined it I found the uterus completely retroverted and the fundus fixed under the ilio-synchondrosis; I replaced the uterus and kept it in position by a pessary; the backache and local pain were completely relieved, but the vomiting grew worse. After trying various remedies without material benefit, I dilated the cervix, and after the second dilatation the vomiting completely ceased. Since then, I have had many cases, some of them extreme cases; one where the patient was so ill that I was sent for to bring on abortion as the last resort, and in all relieved the vomiting by dilatation and local treatment, except in two instances, one a patient that left town after one dilatation, and the other was a hospital case, where the whole vulva and vagina were completely covered with inflamed and sensitive venereal warts.

Although vomiting in pregnancy is so common that it is one of the most reliable of all the early symptoms of pregnancy, after a close study of many cases I am convinced that marked vomiting in pregnancy is, in the majority of instances, due to an abnormal condition of the cervix uteri. The cervix may be the seat of acute disease, or the tissues are abnormal from previous disease or imperfect development of the cervix, and in the majority of cases the cause of the vomiting will be found in the cervix. Not long since a handsome, healthy young woman came to my clinic in great distress about her abdomen growing large—she had been married four or five months. She said she had not had her menses, but she could not be pregnant, for she had not had any morning sickness, and all her friends said it must be a tumor. On examination I found the cervix perfectly healthy, and the uterus enlarged as it should be in pregnancy at the fifth month.

Many women do not have nausea with pregnancy, and the absence of that symptom indicates a healthy cervix, and its presence I believe nearly always indicates local disease or an abnormal state, the result of disease or imperfect development.

In looking over the literature, it is surprising how little has been done in the way of local treatment, and how much women have been dosed with almost every kind of drug for it. To-day, in our best text-books on obstetrics it is not treated as a symptom indicating disease, but merely as one of the symptoms of pregnancy, and local

treatment may be referred to, but it is not advised. No one denies how serious it often is, and that now and then it causes death. In 1873 Dr. Alfred H. McClintock, in a paper read before the Dublin Obstetrical Society, in which he advocated induction of abortion as the only thing to do in extreme cases, says that without much trouble he had collected the record of fifty deaths from vomiting in pregnancy, and he reports thirty-six cases in which abortion was induced as a last resort, with twenty-seven recoveries and nine deaths; but he had nothing to say about local treatment.

In a paper before the London Obstetrical Society, in 1871, on "Vomiting in Pregnancy: Its Cause and Treatment," Dr. Graily Hewitt claims that the severe forms are due to local disease, but makes the mistake of attributing it all to his hobby—displacements, flexions, and versions.

In the London *Lancet* of February, 1878, Dr. M. O. Jones, of Chicago, Ill., wrote a paper on "Vomiting in Pregnancy," and advocated in certain cases the local application of nitrate of silver to the os uteri as a cure. In some cases this will undoubtedly stop the vomiting. Dr. Copeman's paper came out in the same year, May, 1878, in the *British Medical Journal*, and was followed by a number of articles and reports of cases confirming Dr. Copeman's views. In 1879, when Dr. Sims returned from Europe, I had two or three cases which I had him see as typical ones treated by Dr. Copeman's method of dilatation. In 1880 he wrote a paper on the subject, and it appeared in the *Archives of Medicine*. In my paper on "Laceration of the Cervix," read before the County Medical Society, 1881, under the head of Prevention, I said: "When a woman becomes pregnant it must not be taken for granted that the neck of the uterus is perfectly healthy, or if it is in good condition at this time, that it will remain so throughout pregnancy."

Morning sickness to a moderate extent may occur without any perceptible disease of the cervix, but, as a rule, it is a pretty certain indication that there is an unhealthy condition of the neck of the uterus. For two years past, I have not seen a single case of this distressing condition that did not yield in a few days to local treatment, while several of my cases were not helped by the usual remedies.

If, during pregnancy, there is nausea, leucorrhea, or any indication of disease of the cervix, an examination should be made and the case treated, not only to relieve the symptoms, but in order to get the neck of the uterus in a healthy condition before labor.

The danger of inducing an abortion by treatment is by no means as great as I at first supposed it would be, and I think that with reasonable care many more cases of abortion and premature birth could be obviated than would be caused by the treatment. Applications can be made to the cervix, and for at least three-fifths of an inch within the canal, and tepid vaginal injections can be safely used during pregnancy.

For the relief of nausea, I have found dilatation of the canal for three-fifths of an inch to be, so far, perfectly successful in relieving this symptom and in softening the hardened condition of the cervix so commonly associated with it, and perhaps causing the vomiting. Sometimes the index finger introduced to the first joint will answer, but in many cases, especially in primiparæ, it is very difficult to get even the point of the finger into the cervix. I now use a modified uterine dilator bent nearly at right angles, so that not more than three-fifths of an inch can enter the canal; it is opened by a screw adjustment which enables you to regulate the extent of dilatation, and its shape makes it easy to introduce it even when the cervix is, as it often is, very high and far back in the pelvis.[1] In some cases, there will be slight hemorrhage after even moderate dilatation, and usually one dilatation completely relieves all vomiting. After dilatation, the neck soon becomes shorter and much softer.

I caution my patients, when pregnant, to be careful at the time that they would expect to have their menses if not pregnant, and to be especially careful if any of the usual premonitory symptoms should become manifest; for I am satisfied that at this time abortion or premature labor is most likely to occur.

If not successful in correcting any trouble of the cervix, and there is any discharge, vaginal injections are to be used, and for some days before labor is expected antiseptic injections are used once a day. In all cases I have the nurse come early, and if these carbolized injections are not used before, one is given at the first indications of labor beginning, and everything must be in readiness for the carrying out of a somewhat modified form of Listerism during and after labor, until the discharge ceases. An examination is carefully made of the cervix and uterus before the patient is allowed to sit up. If obstetricians would take as much pains to prevent laceration of the cervix uteri as they do to prevent laceration of the perineum, much would be done toward obviating this accident. They should avoid rupturing the membranes until it is absolutely necessary. In a rigid os, carefully and slowly assist dilatation with elastic dilators. In dryness of the parts, freely use lubricants. When the pains are very powerful, and the voluntary efforts at expulsion violent, the latter should be controlled, if necessary, by chloroform at the time of the head passing the cervix, and one or more fingers be kept against the head, and an effort made to regulate and modify the more violent efforts at expulsion. Sometimes an opportunity will be found to help the cervix over a part of the head, where it is retarded more than at other points.

It is true that many cases of lacerated cervix give the history of forceps being used, but this may be due to the fact that those conditions which necessitate the use of forceps are often the same in which a laceration of the cervix would take place whether the forceps are used or not. To avoid lacerating the cervix by the use of forceps, it is well to dilate the cervix as much as can safely be done before they are applied, to decide as early as possible that forceps are necessary, and to handle them skilfully, adjusting them accurately, and pulling steadily and in the right direction and at the right time. Forceps, timely and skilfully applied in retarded labor, often prevent sloughing and some of the worst forms of lacerated cervix.

Anyone who has watched carefully the changes that take place during pregnancy, can readily understand that any condition of the tissues of the cervix which prevented its softening might cause reflex vomiting. A few weeks after impregnation the cervix becomes congested, is longer than normal, and bluish in color; by the second month the congestion is at its height, and the mucous membrane may be much softer than normal, but underneath it hard tissues may be felt, and the cervix is not completely softened until after the fourth month. In the later months it may be so soft as to make it somewhat difficult to define its outlines, and the os internum seems to be the only thing which prevents an escape of the contents of the uterus. A week or so before labor the cervix may be stretched and flattened to such an extent that it cannot be defined at all.

Infiltration, congestion, and swelling always precede this softening process, and if the tissues are imperfectly developed, or if they are indurated by disease, or left indurated after the disease has subsided, it is plain that the softening process cannot take place normally. If there is

[1] In my last instrument represented by the wood-cut, the screw is left out, as I find the hand a better guide as to degree of force needed to dilate.

cystic disease of the glands or follicles the softening cannot take place normally. If there is granular erosion, or hard cicatrices from laceration, or diseased everted tissue, it cannot take place normally. In cases of subacute catarrh, there is often hyperæsthesia of the mucous lining, and deeper tissues may be hardened and changed, and thus the softening process preparatory to enormous expansion cannot normally take place, and reflex vomiting is the result.

I admit that without further proof the above would not be convincing, but if the following plan of treatment is adopted, I am certain that nearly every case of vomiting, no matter how severe, can be cured without any special medicine being used by the mouth, except what may be needed to regulate the bowels and keep the general health good.

If a patient comes to me suffering from nausea and vomiting, and there are other symptoms of pregnancy, instead of dosing her, I make a local examination and give local treatment for any disease of the cervix that I may find. If there is no active disease I would dilate the cervix, knowing from experience how frequently it will give relief. The dilatation should not be made when the menses would be due, nor when any of the usual premonitory symptoms of the menses existed.

The vulva and vagina are carefully washed with a 1 to 3,000 solution mercuric bichloride, I then dip the blades of my dilator in pure carbolic acid and shake off the free acid and introduce the points into the cervix for about half an inch, and slowly dilate until the blades separate from one-third to one-half an inch. If there is an eroded or everted diseased tissue present, I touch it lightly with an applicator that has been dipped in pure carbolic acid. I then, with a powder-blower, cover the cervix with a thin layer of iodoform, and place against the cervix a flat pledget of borated absorbent cotton soaked in pure glycerine, which is to be removed in twenty-four hours by means of a short string attached to it. In some cases there is slight pain, but in most cases no pain or real disturbance whatever is produced. As a rule, this will relieve nausea; but after four or five days, if there is still nausea, I repeat the dilatation and may pass the dilator three-fourths of an inch, and in some cases where the cervix is long, even more. Very rarely will more than two dilatations be needed. In some cases the cervix is so patulous that dilatation may seem to be useless, but well up in the cervix tight bands may be found, and when stretched complete relief is effected. Even where the cervix is lacerated and apparently open, bands may be found, and when stretched relief is obtained. It is easy in such cases to recognize when the end of the dilator comes against the os internum, for it is firmly closed, and by passing the instrument until the os is felt and then slightly withdrawing it, dilatation can be done without much risk. In severe cases the cervix may be of a very bluish-black color. The glycerine application causes a free watery discharge and relieves this congestion. Formerly I used nitrate of silver for granular erosion, but I found that the carbolic acid and glycerine has an equally good effect.

If there is a doubt about the amount of dilatation, the best test is to put the patient on her back, and when the index finger, up to the first joint, can be easily passed into the cervix, the dilatation is sufficient. Before resorting to abortion in any case where dilatation up to the os internum failed, I would first dilate the os internum and wait long enough to see if it would stop the vomiting, for this can be done in some cases without abortion necessarily following.

Conclusions.—1. That nausea and vomiting, or morning sickness in pregnancy, should not be considered and treated as merely one of the symptoms of pregnancy, but, as a rule, as indicating an abnormal condition of the tissues of the cervix uteri, due to imperfect development, disease, or the effect of disease on the tissues of the cervix.

2. That any pathological state which interferes with the softening and other changes which the cervix undergoes during pregnancy, may cause nauseal vomiting.

3. That in most cases relief is obtained by freely dilating the cervix uteri below the os internum, and in many instances it is the only means by which relief can be had. It is true that inducing abortion will give relief, but to accomplish this the cervix must be dilated.

4. That in many cases specific medicines given by the mouth are useless, and, as a rule, should not be used until a local examination is made and the indications for local treatment ascertained.

THE LAW GOVERNING THE COMPENSATION OF PHYSICIANS.

By HENRY A. RILEY, ESQ.,

NEW YORK CITY.

THE usual and proper performance of the duties of a physician requires him to answer calls for medical services at times and under conditions when it will be impossible, unfeeling, or at least indelicate for him to stop to inquire who is to pay him for such services. This being the case, it often happens that the physician runs a great risk of losing all compensation whatever, owing to the lack of there being any person at once legally responsible and pecuniarily able to pay.

The legal questions at issue, and the cases decided in the courts on this subject, will be of general interest.

It will, however, be convenient to discuss only the question of the responsibility of a private person who requests medical services for some one else, and reserve until another time the consideration of the case where some public official requests the medical service, and the point is whether his request binds the town or county.

It may in general be stated, that a person who calls a physician to attend some one else is not liable for the physician's bills. The point in the cases almost invariably turns upon the question whether the person ordering the services acted for himself, or as agent for the sick person, and the view the physician took of the relation between them, by seemingly holding the one or the other liable.

The gist of the law of agency is well stated by Judge Daly, of the New York Common Pleas Court, as follows: "It is a general principle of the law of agency that one who procures services to be done for another, is not himself chargeable as the debtor, unless he omits to make known his principal, or erroneously supposes that he has authority, or exceeds his authority, or expressly or implicitly engages to be answerable either by directly promising to pay for them if rendered; or by doing or saying something which justifies the person who is to perform them in supposing that the one who applies to him engages to pay for them." Buck *vs.* Amidon, How Pr. Rep., 378.

An apparent exception to this rule, making the person receiving the services liable for them, is that of a person who requests the services for those whom he is under some legal obligation to support or care for, such as a husband or the father of minor children. The cases illustrative of these points will be instructive. In England, at least until recently, a physician could not collect by law from any one for his services, they being considered as rendered gratuitously without there was an express agreement to render compensation. A curious case showing this, is Vertch *vs.* Russel, 3 Q. B., 928, tried in 1842. The defendant here was a lady of moderate fortune, who requested a physician to attend her brother, who was ill and in indigent circumstances. It did not appear by the evidence that any agreement was made in advance in regard to the matter, but after a time she wrote him a number of letters in which are these expressions: "As your account against me for attendance upon my brother must be formidable, you will oblige me

by letting me have it." "My wish is to present you with some such a sum as you would call upon me to pay you." "I do not know what you would deem, under the circumstances, a suitable acknowledgment." "I hope you will at once tell me what sum will be agreeable to you to accept from me." The physician named £150, which the lady thought too much, and offered £70 in settlement. This amount was declined and suit brought for the larger sum. On the trial a verdict was given for the defendant, which was afterward affirmed. The ground of the decision was apparently that there was no original contract and the letters were not sufficient to take the place of such contract. From the rule preventing the physician from bringing suit without some agreement, it is clear that he would have had no cause of action against the lady's brother.

In Sellen *vs.* Norman, 4 Carr. & Payne, 80, another English case, where the services were rendered to a servant, it was said: "It seems that a master is not bound to provide a menial servant with medical attendance and medicines during sickness, but if a servant fall ill and the master calls in his own medical man to attend such servant, the master will not be allowed to deduct the charge for such medical attendance out of the servant's wages, unless there be a special contract between the master and servant that he should do so."

This case is an apparent exception to the general rule, owing to the relation of master and servant. This relation in this country is not regarded in quite the same light as in England, and it is a question how the courts here would decide the point: there do not seem to be any cases bringing it up.

In Boyd *vs.* Sappington, 4 Watts, 247, a Pennsylvania case tried in 1835, there was a request by a father to a physician to attend his son, the words used being: "Doctor, you must come, I am afraid my son will die."

It appeared by the testimony that the son was thirty-two years of age, and in business for himself. The court held that this request raised no implied promise on the part of the father to pay for the physician's services. If a stranger had called the doctor it would have been a parallel case with that of an inn-keeper, who might summon a physician hastily to attend a sick guest, and such a person would not be liable. Under the circumstances the court held the rule to be the same as if the father had been a stranger. It was said "a different principle would be very pernicious, as but very few would be willing to run the risk of calling in the aid of a physician where the patient was a stranger, or of doubtful ability to pay."

In Smith *vs.* Reddick, 5 Jones L., 342 (North Carolina), the plaintiff brought suit for services as a physician, rendered at defendant's request to a third person, under these circumstances: Reddick was not related, it would seem, to the sick person, but was sent by him for a Dr. Pettis, but not finding him, called upon Dr. Smith, and said: "I have come after you to go and see a sick man." Reddick did not return to the patient's house. The court said "the evidence tended to show that the plaintiff was aware of the fact that the defendant acted merely as a messenger, and did not intend or expect to make himself personally liable for the services which were to be rendered to the sick man. The doctor who was in attendance explained to the sick man, in the presence of the plaintiff, what had occurred, that the defendant, who had been sent for Dr. Pettis, not finding him, as the case was urgent, had applied to the plaintiff to come in his place, and the plaintiff would assist him in performing the operation, which was assented to. If the plaintiff was not willing to assist at the instance and on the credit of the sick man, it was his duty to have made known his objections. To hold the defendant liable under these circumstances, would deter every one from doing the charitable office of going after a doctor for a sick neighbor."

In Buck *vs.* Amidon, 41 How. Pr. Rep. (New York), 370, we find an instructive case. The plaintiff was a distinguished surgeon of New York City, and the defendant a well-known business man, also of the same city. The latter received a telegram from his brother at Groton, Conn., saying that a surgeon must at once be sent up, as a dangerous operation had to be performed, and requesting Dr. Buck's services. He then went to see Dr. Buck, showed him the telegram, urged him to go, secured his consent, met him at the railway depot, and accompanied him. The operation was very skilfully and successfully performed, and when asked for his bill Dr. Buck presented his charge of $400, in the name of the sick man. The patient expressed his surprise at the amount, and a short time afterward payment not being made, Dr. Buck wrote to him as follows:

"MR. J. C. AMIDON, Groton, Conn.:

"DEAR SIR: After waiting a reasonable time without hearing *from you*, I beg leave to remind you that it is customary to settle such accounts as mine, for professional services rendered at a distance, promptly. Hoping it will receive your early attention, I remain," etc.

The bill remaining unpaid, Dr. Buck brought suit not against J. C. Amidon, but against his brother, who had called at his office and requested the services. Dr. Buck testified on the trial that on his arrival at Groton, he had noticed the plain way of living shown by J. C. Amidon, and said he felt surprised that persons in such circumstances should think of sending to New York for a surgeon. These circumstances were introduced to show that the patient was originally regarded by Dr. Buck as his debtor. Suit was nevertheless brought against his brother, and the jury gave a verdict to the plaintiff for the full amount claimed. This verdict was, however, reversed on appeal, the court holding that it would be "preposterous to say, that a person who brings a message to a surgeon from the attending physician of a patient, requesting him to come and perform an operation upon the patient, is by the mere delivery of such a message, chargeable with the obligation of paying the surgeon for his services. He is a mere agent and nothing more, unless he communicates the message in such a way, or does or says something that fairly warrants the surgeon, before he undertakes the service, in supposing that he is the person who is to pay for it, and in this respect it can make no difference that the bearer of the message happens to be a brother of the patient." The case of Crane *vs.* Baudouine, 55 N. Y., 256, occurring in 1873, is a case in the New York Court of Appeals, and is the most authoritative statement of the law as it is in the State. The circumstances were as follows: Mrs. Martine, the defendant's grown-up daughter, was removed from her own house to be under her mother's personal care. Shortly afterward, as the plaintiff testifies, Mr. Martine called and said that the defendant (Mr. Baudouine) wished him to call and see his daughter. Dr. Crane did so, and saw the defendant each day during his visits, left directions as to the proper treatment with the defendant, and told him what to do. He further testified that he did not know that Mrs. Martine was married until a considerable time after he began his visits, and that he charged the defendant on his books and sent him a bill. The defendant denied that he had ever employed the plaintiff or requested any person to call on him. The referee before whom the case was first tried, decided in favor of the defendant. This judgment was reversed on appeal, but on a second appeal the original judgment was affirmed. It was held, that the daughter being married and with a home of her own, had no claim upon the father, and that the fact of removal to his house for better care did not cast any obligation of support upon him. The father would, moreover, be naturally interested in the condition of his daughter, be ready to receive directions as to treatment, and would be likely to repeat to others what the physician might have said; but none of these things would warrant the implication of a promise to pay for the medical services, unless the defendant was under some legal obligation to care for the patient. It is said that the "acquiescence of one in the rendering of

service or benefit to another, not entitled to call upon him therefor, is not equivalent to an acknowledgment that it is rendered at his request. So far as a legal responsibility was concerned, the defendant, though the father of the patient, was a stranger to her and her necessities."

Perhaps the only case sustaining the opposite view here presented is Bradley *vs.* Dodge, 45 How. Pr. Rep., 57 (New York), where the following principle is enunciated: "Where a person calls at the office of a physician, and in the absence of the latter leaves his business card, written on it, 'Call on Mrs. Day, at No. 769 Broadway,' and leaves the card with a clerk in the office with a request to hand it to the physician and to tell him to 'come as soon as possible,' he becomes liable to pay the physician's bill in attending upon Mrs. Day in pursuance of such message." This case was decided before that of Crane *vs.* Baudouine, 55 New York, 256, and in an inferior court, so it can hardly be considered the law in New York State. The case, moreover, enjoys the very unusual distinction of being assailed by the court reporter as bad law in a vigorous note, from which we take the following extract: "Let us see how this thing works: we will take as an illustration an almost every-day occurrence arising in the country.

"A. B. is taken suddenly and seriously ill in the night-time and sends to his neighbor, C. D., living in the next house to his, to have him go after the doctor as soon as he can, for he is in great pain and distress. C. D. jumps out of bed without hesitation and hastily dresses himself, and goes out to his barn and takes a horse from the stable, and not waiting to put on a saddle or bridle, jumps on to the horse with the halter only, puts him at full speed for the doctor's office, some two or three miles distant. On arriving there he finds the doctor absent from home, but his clerk is there, and C. D. at once says, 'Tell the doctor to call on A. B., who has been taken suddenly sick; tell him to come as soon as possible.'

"In accordance with this message the doctor calls upon A. B., and prescribes for and attends him professionally for several days. After a reasonable time the doctor sends in his bill to A. B., and it not being paid as soon as the doctor desires, he calls on C. D. and requests him to pay the bill. C. D., with perfect astonishment asks why he is to pay it. The doctor informs him that he made himself liable to pay the bill because, when he delivered the message, he did not tell the clerk that he came for the doctor by the request of A. B., nor that he acted as agent of A. B. in delivering his message. 'Well,' says C. D., 'the fact was I did go at the request of A. B., and merely acted as his agent in delivering the message, and I will swear to these facts if necessary.' The doctor insists that it will do him no good if he should give such testimony, for the law is settled on that point, as just such a case has recently been decided in New York under just such a state of facts, where the jury in the Justice's Court found a verdict for the doctor for the amount of his bill, and on appeal by the defendant to the General Term of the New York Common Pleas, that court unanimously sustained the verdict of the jury and affirmed the judgment of the court below. 'Well,' says C. D., 'if that is the law, I think I will wait a while before I go after a doctor again as an act of neighborly kindness.'"

In recapitulation it may be said, that the nearly unanimous testimony of the law-books is to the effect that a person who requests a physician to render medical services to another does not himself become liable for the physician's compensation, unless he promises to make such compensation before the services are rendered, or unless he is under some legal obligation to care for the person in whose behalf the services are rendered.

Hydrochlorate of Cocaine.—Want of space has crowded out several interesting items concerning the use of this drug in dentistry, minor surgery, and laryngology.

Progress of Medical Science.

Changes of Hæmoglobin.—In a memoir on the substances which change hæmoglobin, and especially those which convert it into methæmoglobin, Dr. Hayem arrives at the following conclusions: Hæmoglobin gives the blood its characteristic redness, preserves its respiratory capacity, or, in other words, its property of absorbing oxygen, so long as it is not chemically changed. The most complete chemical change it can undergo is conversion into methæmoglobin. This substance is of a brownish color. When shaken in contact with air it does not absorb oxygen. Potassium-ferrocyanide and potassium-chloride both convert hæmoglobin into methæmoglobin; these substances have been used for many years therapeutically; recently nitrite of amyl and nitrite of soda, which have also this property, have been employed. Hayem proposed to ascertain how it is that considerable doses of these medicines can be administered without leading to a change in the hæmoglobin; also, when it does undergo an alteration, and death does not result, by what process the blood is freed from the methæmoglobin. Although hæmoglobin dissolved or rendered soluble by the coagulation of blood has the same respiratory capacity as the hæmoglobin of blood-corpuscles, there is an important difference in behavior between these two varieties in presence of the substances which provoke the formation of methæmoglobin. The hæmoglobin of red blood-corpuscles is indifferent to the action of those substances which convert dissolved hæmoglobin into methæmoglobin. Submitted to the influence of nitrite of amyl vapor, the hæmoglobin of blood-corpuscles is rapidly converted into methæmoglobin, which reabsorbs oxygen; whereas dissolved hæmoglobin, converted into methæmoglobin, is permanent, and persists until the blood putrefies.

Weigert's Method of Staining the Brain and Cord.—A solution of hæmatoxylin is prepared with water and alcohol. The sections are kept immersed in it during an hour, and the temperature is maintained between 104° and 122° F. They are then removed from the solution, washed, and placed for three hours in a two per cent. alkaline solution, or in one of potassium ferrocyanide. Afterward they are submitted to the influence of alcohol, xylol, and Canada balsam as in the usual method. In sections thus prepared, nerve-fibres with a myeline sheath are stained blue, the neuroglia pale yellow, and the ganglia cells brown. This method throws into relief the nerve-fibres with a myeline sheath. In preparations of tabes dorsalis, Clarke's columns appear as light rings against a dark background; microscopic examination shows that a large quantity of nerve-fibres with a myeline sheath have disappeared.

The Treatment of Acne in the Male by the Cold Urethral Sound.—Dr. Sherwell, of Brooklyn, believes that acne and rosacea, either alone or combined, depend in almost every instance upon conditions reflected from the sexual or digestive apparatus, and in the relative order as given; and that even the red face and nose of the coachman, of whom Hebra speaks, are only intensified, not created, by the external irritation of biting winds, etc. His theory of the etiology of the more pronounced forms of acne, as the tubercular variety, and rosacea, is that nine out of ten cases are caused by congestion of the mucous membranes of some of the viscera spoken of, probably passive in character. Why they should be reflected upon the face he does not know, and can form no opinion, any more than he can in urticaria, which arises, in his belief, from a more active and ephemeral but similar condition of the gastro-intestinal mucous membrane in the same relative number of cases. He thinks it probable, however, that the mucous irritation and consequent congestion is situate higher up in the alimentary canal in urticaria. In these cases, too, it

might be difficult to explain why the efflorescences are almost always situate on the trunk and limbs. It will be seen in the foregoing how far he is removed from the Marsyan-like dogma of the Viennese school, and not alone in respect to these diseases, but in regard to others, as, for instance, eczemas of the infant or child; in those cases he pays quite as much attention to the primæ viæ as to the skin, considering the trouble as springing very often, if not generally, from gastro-intestinal irritations. In short, he believes in the complete analogy between the skin and mucous membranes, and thinks their reflected action is much more common and important than many authors would have us believe. He recommends in persistent cases of acne and rosacea in the male subject, the use of the cold urethral sound, and that too with some degree of diligence. He does not, of course, mean by this that proper topical measures to the parts affected are not to be used in conjunction therewith; or that tonic, cathartic, dietetic, and hygienic measures and principles to meet common-sense indications should be omitted.—*Journal Cutaneous and Venereal Diseases*, November, 1884.

Elephantiasis Scroti.—A tumor of the scrotum, weighing forty-two pounds, was successfully removed at the Prince Alfred Hospital, Sydney. The patient was a white man, twenty-four years of age, with a good family history. He had resided where elephantiasis is unknown. At the age of six years, an enormously hypertrophied prepuce was removed. At the age of twelve years he received a blow on the scrotum, followed by a painless enlargement, and at the same time he had an attack of chyluria. From this time on there were frequent febrile attacks, chyluria, and gradual increase of the tumor, until the penis was lost to view. Urinary sinuses were also formed. Repeated examination of the blood showed absence of filariæ. Leucocytes, however, were in excess, and the red corpuscles appeared swollen and did not form rouleaux. The operation left both penis and testicles, and was accomplished with little loss of blood by the use of Esmarch's roller and india-rubber compressor. The tumor was composed of dense white fibrous tissues, interspersed with patches of adenoid growth. It contained numerous enlarged blood-vessels, and dilated lymph channels. There were patches of thickened horny epidermis, excessive deposit of pigment in the rete, and the stratum granulosum was increased in thickness.—*Australasian Medical Gazette*, June 15, 1884.

The Relations of Hysteria with Scrofula and Tuberculosis.—Professor Grosset, of the Montpellier School of Medicine, concludes a series of articles on this subject (*Brain*, part xxvi., 1884) by the following summary: "Tuberculosis, like all other diatheses, is an essentially general and constitutional disorder; pulmonary phthisis is but one of its manifestations. It may show itself as a neurosis, and more particularly as hysteria. Just as chorea is often a rheumatic disease, angina pectoris a gouty disease, thus hysteria may be a tubercular disease, taking the word tubercular in its nosological, not in its anatomical sense. In speaking of hysteria as a tubercular disease, therefore, we do not assume the existence of tubercular matter in the nerve-centres, for we do not look upon tubercles as pathognomonic of the diathesis, which exists without them, as they may exist without it. The tubercular diathesis is essentially hereditary, but may be understood only if it be followed up in families under its various manifestations from generation to generation. We then see how hysteria may represent diathesis in one of the members of the family as meningitis may do in another, or Pott's disease in a third. Besides such cases, in which hysteria is the sole manifestation of the diathesis, there are others where the same individual presents, simultaneously or successively, the two orders of manifestations, pulmonary and neurotic. We then witness the typical phenomena which characterize other Protean diseases; the two orders of symptoms alternate and replace one another; or if they be simultaneous, influence and modify one another, until one of them gets the upper hand. In other words, the mutual relations between the phthisis and hysteria of the tubercular diathesis are like those between the cerebral and abdominal symptoms of typhoid fever, or between the visceral and articular manifestations of gout. These remarks concerning hysteria and phthisis form but a fragment of a great and true chapter concerning the relationship of all neuroses, and even of all nervous diseases, to the diatheses and general diseases. If we cannot understand the neuroses without perceiving their mutual relations, if the consideration of the '*neuropathic family*' is indispensable for securing a clear grasp of the phenomena of neuropathology, it is yet necessary to go still further and complete all this by the conception of the '*diathesic family*,' outside of which we shall find nothing but isolated, scattered, meaningless units. Hitherto the neurotic element of hysteria has much too exclusively attracted attention; the diathesic element has not been met by treatment. Though we have no specifics against diatheses (except in the case of syphilis), we nevertheless have various rational means to deal with them. The treatment of rheumatism is not that of scrofula, nor that of tuberculosis. Hence, it is not indifferent to know whether a neurosis depends upon the one or the other constitutional state. Three categories of indications will have to be fulfilled in the full treatment of hysteria. First, the actual symptoms are to be met with appropriate measures, such as ovarian compression, ether inhalations, æsthesiogenous applications, etc. Second, the state of the nervous system, which is to be modified at any cost: hydrotherapy is often useful; change of surroundings; electricity, galvanic, but more especially static. We have little faith in the bromides. Third, the diathesis forms the fundamental ground for a chronic exhibition of arsenic, sulphur, alkalies, chloride of gold, mineral waters, etc. Unless these three orders of indications be duly taken into account, our measures, based upon a superficial diagnosis, must necessarily remain sterile."

Rational Treatment of Typhoid.—Dr. Réal, under the above title, describes in *L'Union Médicale*, September 28, 1884, a method of treating typhoid fever, which consists principally in the administration of large doses of subnitrate of bismuth. He claims that it disinfects the intestinal canal, and prevents putrefactive changes by fixing the sulphuric acid, free or nascent, and changing it into an insoluble, inoffensive, black sulphate. Any substance employed to prevent or destroy putrefaction in the intestinal canal must be a powder insoluble in the digestive tract, inoffensive in itself, but having a real chemical action on the putrid matter. The subnitrate of bismuth he has found to fulfil these conditions better than any other agent. He administers it as follows: The first day he gives a starch clyster containing two and a half drachms of the bismuth, and by the mouth, from five to six drachms within an hour in divided doses. The second day this same quantity is given by the mouth, but the doses are extended through the twenty-four hours. This is continued daily until toward the end of the treatment, the dejections, becoming less and less black, contain particles of the white bismuth, when the daily dose can be gradually decreased. The diarrhœa is usually arrested. If constipation exists, sulphate of soda in doses of ʒ ij. to ʒ iv., by the mouth or rectum, may be given. He cites three successful cases in children where he has employed this treatment.

Psyche-ology.—One day last summer two boys were rowing past the Riverside Hospital, on Blackwell's Island. As they passed close to the Board of Health boat lying at the wharf, one of them rested on his oars, and spelling out her name, P-s-y-c-h-e, pronounced it "fish." "That don't spell 'fish,' you great idiot," shouted the other, "that spells 'Physic;' it's the doctor's boat."

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RECENT CONTRIBUTIONS TO GASTRIC PATHOLOGY.

A NUMBER of contributions have of late been made to the subject of gastric disturbances. It was in 1878 that Leube first (after Beard) called attention to the subject of nervous dyspepsia, so-called; and a little later Julius Glax and R. Burkart wrote monographs regarding it. Leyden and Krafft-Ebing have also called attention to certain gastric neuroses found in spinal irritation and as the result of onanism. Quite recently Leube, at the meeting of the Congress of Internal Medicine, brought up the subject of nervous dyspepsia again, and both he and Edinger have made important contributions to the methods of diagnosis. Clifford Allbutt's Gulstonian lectures are most suggestive as regards the subject of gastric neuroses, while very recently Bouchard, Sée, and Mathieu have written upon gastric dilatation, and Glazinski and Jaworski have made an interesting preliminary communication upon the physical methods of diagnosticating stomach disease.

A perusal of the various communications above referred to leads to the impression that great strides have been taken in gastric pathology during the last five years. But it is equally certain that almost no definite and fixed results have yet been obtained. It would be useless to attempt any generalization, therefore, as regards the present state of our knowledge of the pathology of the subject. We shall, however, present to our readers an analysis of some of these later contributions since they show that certain lines have been laid down, working along which, pathology will in no long period of time reach something positive as well as practical.

Professor Leube's paper (*Centralblatt für Klinische Medicin*, January 5, 1884), in which he lays down rules for the examination of the stomach contents, has already been given in substance in this journal.[1]

A preliminary contribution covering similar ground, by Drs. A. Glazinski and W. Jaworski, of Cracow, has appeared in the *Berliner Klinischer Wochenschrift* of August 18, 1884. These authors have made examinations of the action of the gastric juice in two hundred cases of health and disease. Their method was as follows: the person experimented upon, having fasted till the stomach was empty, is given the white of a hard-boiled egg and 100 c.cm. of distilled water. He then remains quiet for an hour and a quarter.

At the end of this time, by means of a soft syphon tube, 100 c.cm. of water are introduced into the stomach, and the whole contents syphoned out and preserved for examination. More water is then introduced and removed in order to be sure that nothing remains in the stomach cavity. If the digestion was healthy the following conditions were found:

1. No pieces of albumen were returned through the syphon.

2. The stomach juice is clear or opalescent. It is neutral or feebly acid in reaction, and contains, as shown by methyl-violet, no hydrochloric acid.

3. The filtrate gives none of the reactions for syntonin or peptone. On the addition of a little hydrochloric acid it digests, in less than seven hours, a very small piece of albumen.

4. Under the microscope the fluid withdrawn shows no ferment-organisms or free nuclei.

If, despite the fact that the foregoing conditions are found, some dyspeptic trouble is complained of, a second examination is to be made, but in this case, only half an hour after the ingestion of the albumen. In healthy stomachs at this time the following ought, according to our authors, to be found:

1. About half of the albumen comes away with the fluid, and the pieces will be found swollen and their borders frayed.

2. The filtrate is strongly acid and shows the presence of HCl. It also shows the presence of syntonin and gives a moderately strong reaction for peptone.

3. The filtrate digests albumen without the addition of any acid.

4. Under the microscope no ferment-organisms or free nuclei are visible.

On the other hand, in pathological conditions it is found:

1. That the albumen ingested remains in the stomach much longer than an hour and a quarter, and this is what most frequently occurs. Sometimes the albumen is swollen and partly digested; at other times, when the gastric juice is absent, there is hardly any change.

2. The stomach contents are cloudy, of a yellowish-green or bluish color, and mixed with greenish-yellow flocculi.

At the end of half an hour the stomach contents are sometimes much more strongly acid, sometimes less acid than normal. After an hour and a quarter, the filtrate, if any albumen is present, is usually more acid than normal. After half an hour the filtrate may or may not contain peptone. After an hour and a quarter the fluid contains peptone. Microscopic examination shows the presence of mucous corpuscles colored with bile-pigment and ferment-organisms, or free nuclei.

The authors advise that after examinations have been made in the manner laid down by them, tests of the vital capacity and contractility of the stomach according to the method of Jaworski should be made. If no physical signs of disturbed digestion exist, then the gastric symptoms must be referred to a nervous basis.

The article of Leube upon nervous dyspepsia, read at the Congress of Internal Medicine, has been given in de-

[1] THE MEDICAL RECORD, April 12, 1884, p. 405.

tail in THE RECORD (May 31, 1884, p. 621). The attempt to give to nervous dyspepsia a distinct nosological status was not received with favor, and it may be stated that German writers generally show an inclination to abandon the term nervous dyspepsia for a broader one.

The article by Professor Bouchard is in the form of a lecture delivered before the Hospitals Medical Society of Paris on June 13th, and is most suggestive. He claims that gastric dilatation is of very frequent occurrence. Indeed he finds it in one case out of three. But the main part of his paper is devoted to an attempt to explain the so-called reflex phenomena of dyspepsia as well as many of the concomitant symptoms, by assuming that the fermenting food generates poisons and causes a true toxæmia.

In dyspepsia then we must look out for a toxæmic condition, just as in renal disease we must watch for uræmia. This view, which was suggested first, we believe, by Senator (*Berliner Klinischer Wochenschrift*, 1868, No. 4), is based by its author on a study of two hundred and twenty cases. It is in harmony with the present tendency of pathologists to reduce to the minimum the reflex and sympathetic processes as causes of disease.

An important contribution to gastric pathology has been made by Professor Germain Sée, and Dr. Albert Mathieu in the *Revue de Médecine*, Nos. 8 and 9, 1884.

These writers treat of atonic dilatation of the stomach, which they consider as does Bouchard, to be a very common condition. They believe also that many of the cases of "nervous dyspepsia," as described by Leube, should really come under this head. Atonic dilatation is not produced by mechanical distention, as is usually stated, but rather it is the result of an adynamic state of the general system. The pathology of gastric dilatation is thus comparable to that of certain forms of cardiac dilatation. Both are expressions of myasthenia. During and after adynamic fevers, or as the result of profound anæmia, or in conditions of mental depression, gastric dilatation occurs. Psychical causes are quite prominent in this affection, ranking only second in frequency. MM. Sée and Mathieu give an elaborate array of cases, and discuss the symptomatology and diagnosis.

The chief symptoms are flatulence, pains, vomiting, constipation, dyspepsia, and reactive effects upon the general system.

In the matter of diagnosis the authors are inclined to treat with derision some of the "fantastic" methods of physical exploration suggested by the Germans. Careful comparative examinations by percussion, after the introduction of effervescing powders, and then of pure water, are specially recommended. Percussion without these measures cannot of itself decide the diagnosis. Auscultation and succussion furnish also some corroborative signs. For the many details of this valuable paper, however, we must refer our readers to the originals.

TETANUS INFANTUM.

IN considering the comparative frequency and great fatality of the first kinesio-neurosis of life, it seems strange that we have not more definite and satisfactory knowledge of its etiology. The mere fact that many very diverse causes have been given by good observers shows pretty conclusively that no one of them is always operative. The most satisfactory way to reach a correct conception of this peculiar condition is first to consider the nervous status of the infant in general, and then in each case to carefully seek out the immediate irritant. What, then, constitutes the physiological predisposition to this severe and fatal tonic spasm of early infancy? The peculiar anatomical arrangement of the nervous system at the beginning of life is well known, and explains the physiological phenomena seen at this time. Although the brain is comparatively large in size in proportion to other organs, its condition is immature. It is soft from the immense amount of water it contains, light in color, with the gray substance and convolutions undeveloped. As a result the functions of the cerebrum are largely in abeyance. The spinal cord, on the other hand, the first formed nervous structure of the fœtus, has at birth a large development and a marked functional activity. As reflex action is one of the principal characteristics of the cord, it follows that in early life this kind of activity must overshadow all voluntary forms of motion. Moreover, at this time reflex action is not strongly held in check by cerebral inhibition. As the infant grows and the gray matter and convolutions become more developed, its nervous system reaches a condition of more stable equilibrium; but during the first days of life, with active, readily irritated spinal centres, and a watery brain incapable of much controlling energy, the only wonder is that reflex motor disturbances are not more frequently seen.

There are many ways in which irritants may act on the unstable nervous system and produce a tetanus. In this affection, as in eclampsia, the source of disturbance must be carefully sought out and, if possible, removed. Irritation and inflammation of the umbilical vessels or umbilicus have frequently been noted by different observers. Sometimes retained meconium in the intestines appears to be the source of trouble. A condition of personal and domestic filth, the infant being allowed to remain surrounded by its fermenting excreta, or even impure air and various atmospheric disturbances, have seemed to be sufficient to upset the impressible nervous system of the young infant and bring on a tetanic spasm. Sometimes violence to the cerebro-spinal axis during parturition is the starting-point of trouble; in other cases meningitis may be found. One of the late ideas is that an adherent prepuce may be a factor in causing the disease. There are thus many general and local agencies that, under favorable conditions, are capable of acting on the easily excited spinal cord and motor nerves, to the production of general or partial tetanus. Perhaps the most remarkable contribution to the literature of this subject appeared in 1846, in an article by Dr. J. Marion Sims in the *American Journal of the Medical Sciences*. This distinguished writer then first advanced the idea that tetanus was caused by a centric disturbance due to pressure from an inward displacement of the occipital bone. This displacement may at times be very considerable; again it may be so slight as to require careful examination for its detection. The pressure exerted by the occipital or parietal bones extends itself on the pons, medulla oblongata, and cord, with a resultant spasm. This explanation of the phenomena of infantile tetanus did not at the time meet with a favorable reception by the profession, and has since been almost forgotten. There has lately

appeared a monograph by Dr. J. F. Hartigan, in which the original views of Dr. Sims are again advanced and fortified by cases and autopsies. Histories are given of forty-nine cases in all, some seen before and some after death. Six of these cases that were seen early recovered under postural treatment. In twenty-five cases autopsies were made, in which a generally uniform post-mortem condition of congestion and extravasation of the brain and cord was found. No other internal lesion was observed except at times an engorgement of the lungs. Finally, eighteen cases are given in which a history was obtained after death, although some were seen before the fatal result, but where post-mortem examination was not allowed. One factor in connection with all these cases that the author especially brings out is that there was very generally found a depression of the occipital bone. The relation between the arrangement of the bones externally and the extravasation found internally at the autopsies, has afforded occasion for generalizing as to cause and effect, also to confirm the idea advanced so long ago by Dr. Sims. If we have here the only true pathology of tetanus infantum, the treatment of this fatal malady will be simple and frequently successful. Although a depressed occipital bone is physiological during the parturient state, if it persists after birth it soon becomes pathological, and must be relieved by reducing the displacement and thus saving the cerebro-spinal axis from injurious pressure. Unfortunately, however, while literary medicine is often so beautifully exact and satisfactory, clinical medicine is full of doubt and perplexity. Many excellent observers have not been able to discover any noticeable displacement of the occipital bone at the beginning of the disease, and if seen later it may sometimes be simply the result of brain shrinkage accompanying the rapid general atrophy. The tetanic spasm, by greatly interfering with respiration and circulation, would naturally produce the congestions and ecchymoses found on post-mortem examination in the cerebro-spinal axis and lungs. Doubtless a primary inward displacement of the occipital bone may at times be the first source of trouble. We think, however, that in tetanus infantum different cases may have widely different causes. When we remember the favorable development of the infant's nervous economy toward such an accident, varying doubtless in different individuals within wide limits of susceptibility, it seems scarcely probable that only one universal cause is always operative. Any injury or trauma should rather be looked upon as a possible exciting cause and endeavor be made to remove it. Certainly the medical treatment of this disorder is extremely unsatisfactory.

ARTIFICIAL HYPNOTISM IN PHYSIOLOGY AND THERAPEUTICS.

The so-called mesmeric sleep—artificial or induced hypnotism—although it can scarcely be said as yet to have found a well-recognized place in the domain of either physiology or practical medicine, and though still looked upon with disfavor and contempt by very many in the profession, is being made the subject of earnest study—as it was by the late Dr. Beard in this country—by several eminent physiologists in England and on the Continent.

Dr. Langley, of London, has written a very entertaining and scientific article on the subject in the *Popular Science Monthly* (October, 1884); the late Professor Laségue, of Paris, was an accomplished hypnotist, devoted much attention to the subject, and used to turn it to account in the treatment of his hysterical patients; Emile Yung, who has lately written a very entertaining book on "Normal and Pathological Sleep," has a long chapter on mesmerism, in which he details the advantages which may be derived from it in hysteria; Charles Richer, in his "Clinical Studies in Hystero-Epilepsy," speaks highly, as a means of treatment, of "Braidism" (so named because Braid, of England, in 1843, was the first to give this artificial sleep a scientific exposition); and Heidenhain, of Breslau, has experimented much in hypnotism and written much about it.

At a recent meeting of the French Association for the Advancement of Sciences, Dr. Bernheim, of Nancy, well-known as a clinician and the author of a work on practical medicine, read a report of three cases of chorea cured by what he calls "the hypnotic suggestion." He remarks that "suggestion" in the hypnotic state may "realize" (cause) paralysis, contraction, anæsthesia, and divers functional troubles, and that it is natural to demand if this same "suggestion" may not in certain cases cause such functional troubles to disappear. Dr. Bernheim affirms that for many years he has obtained a great variety of excellent therapeutic effects, and often substantial cures by the "suggestive" method, "which consists, during the provoked sleep, in affirming the disappearance of the different subjective symptoms experienced by the patient."

Drs. Heurot and Voisin, at the same meeting, related cases in their practice where they had derived benefit from "suggestion." Voisin's patient was a female, "debauched, coarse, and lazy." He utilized the hypnotic sleep "to calm this hyper-excitation, mental and sensorial!" During the mesmeric sleep—which he kept up for from ten to twelve hours a day—he improved the opportunity to *suggest* to the patient "ideas of obedience, of submission, of decency, and exhorted her to useful labor." He also encouraged her to learn by heart entire pages from some moral book. "A complete transformation was effected in several months!"

Whether or no, in accordance with the above example, it shall yet be found that the best way to reform the immoral and criminal class is to *hypnotize* them and "suggest" morality, subordination, and decency, remains for future sociological experimenters to decide.

Dr. J. N. Langley, in the *Popular Science Monthly*,[1] who thinks that "there is no doubt that mesmerism may help and sometimes cure persons suffering from certain diseases of the nervous system," ably treats the subject from a physiological standpoint. He thinks that "as disease may be the result of either over-activity or of under-activity of any part of the central nervous system, it is reasonable to suppose that a beneficial effect will follow the employment of a method which allows us to diminish or increase this activity at will." This is, he thinks, a side of the question "which is of the greatest interest both to physicians and to physiologists, since it bears directly upon the problem of the influence of the

[1] Popular Science Monthly, October, 1884: The Physiological Aspect of Mesmerism.

nervous system on nutrition. "There is good reason to believe that, by directing attention strongly to any particular part of the body, the nutritive state of that part of the body may be altered. The determination of the actual way in which this is brought about is full of difficulties, but the following way is, at least, theoretically possible. It may be that the nerve-centres connected with the tissue in question are made unusually active, and that they send out nerve-impulses of a trophic nature, that is, impulses which directly control the nutrition of the tissues. The alteration in the tissue caused by its changed nutritive state—its changed metabolism—may conceivably be beneficial or detrimental to the whole organism; it may give rise to a diseased state, or get rid of an existing one."

This writer's explanations of the phenomena of hypnotism are summed up in the following propositions: "The primary condition of mesmerism is an inhibition of a particular mode of activity of the cortex of the brain, in consequence of which the will can no longer be effective. This inhibition may be brought about by nervous impulses coming from certain sensory nerves, as those of sight, touch, and hearing. It may also be brought about by impulses or changes arising in the cortex itself. The inhibited cortex, and probably also inhibited lower centres of the brain, send out inhibitory impulses to all other parts of the central nervous system, so that the mesmerized male or female gradually passes into a state of torpor or even of complete anæsthesia. The phenomena of the excitable stage of mesmerism are proximately determined by the possibility of exciting any particular centre alone, without exciting at the same time other centres, by which its activity is normally controlled. In lower animals this stage is less marked, in consequence of a greater interdependence of the various parts of the central nervous system.

News of the Week.

M. Pasteur is going to Rio Janeiro to study yellow fever.

Our National Sanitary Patrol.—The Revenue Marine, consisting of 38 vessels and 950 officers and men, covers the entire coast of our country and acts when needed as a sanitary patrol.

Epidemic of Hydrophobia in Vienna.—A cable report, under date of November 26th, states that a veritable epidemic of hydrophobia is prevailing in Vienna. Already eighty cases have been reported.

Epidemic Dysentery.—The daily papers have had much to say regarding a fatal epidemic disease which has been attacking the inhabitants of Eastern Kentucky and Western Virginia. We are informed that the disease is a dysentery caused by drought, filth, and bad food. The stories regarding it have been much exaggerated.

A Hermaphrodite.—A person calling herself by the ambiguous name of Madame Duplex de Balzac, informs the profession that she (or he) has just arrived from Europe and "intends to exhibit herself (or himself) before any person who is anxious to enlighten himself on natural science." Dr. William T. Lusk certifies that Mrs. Duplex de Balzac is an example of hypospadias. The generation organs are those of a male, but the general habit of the individual (and it is this which makes the case an interesting one), is of the feminine type. The bones are small, the wrists and ankles are slender, the breasts, the hair, the complexion, and the voice are those of a female. Dr. William M. Polk states that it is a case of true hermaphroditism.

Money for Physicians' Widows.—The forty-second annual meeting of the Society for the Relief of Widows and Orphans of Medical Men, was held last week, and the following officers were elected by ballot: *President*—Dr. S. S. Purple; *Vice-Presidents*—Drs. J. L. Vandervoort, J. W. Warner, T. F. Coch; *Treasurer*—Dr. John H. Hinton; *Board of Managers*—Drs. G. M. Smith, T. C. Finnell, Afred C. Post, John J. Mulhan, Willard Parker, Isaac E. Taylor, and W. T. White. The report for the year ending September 12th, showed that the actual expenses of maintaining the Society were but $47.85, while the total receipts from various sources were $50,016.33. There was paid for annuities to 14 widows and 8 orphan children $4,252.50, and invested in bonds and mortgages $37,000. The total assets of the Society, on September 19th, were $143,447.96.

Suicide of an Insane Physician.—A Danish adventurer calling himself Dr. F. De Castro, committed suicide in Newark last week. His last will, dated February 12, 1883, read as follows: "After death I request that my body shall be given to the Chicago Medical College, or any medical college in the city of Chicago, upon the following conditions: After the body has been serving its medical purpose for science, the entire skeleton be placed in the museum with the following inscription on the brow of the skull: 'This is the skeleton of F. De Castro, the great traveller and linguist, who died a martyr for those he loved so well.' If the Chicago colleges will not accept the body, any medical college in the city of New York which will comply with my request may take charge of it."

The President's Message.—In his annual message, referring to the subject of cholera President Arthur states that, pursuant to his proclamation, the Secretary of the Treasury prohibited the importation of rags and the admission of baggage of immigrants and of travellers arriving from infected quarters. "Lest this course may have been without strict warrant of law, I approve the recommendation of the present Secretary, that Congress take action in the premises, and I also recommend the immediate adoption of such measures as will be likely to ward off the dreaded epidemic and to mitigate its severity in case it shall, unhappily, extend to our shores."

Regarding the Army Medical Museum, he says: "During the past session of Congress a bill to provide a suitable fireproof building for the Army Medical Museum and the library of the Surgeon-General's office received the approval of the Senate. A similar bill, reported favorably to the House of Representatives by one of its committees, is still pending before that body. It is hoped that during the coming session the measure may become a law, and that thereafter immediate steps may be taken to secure a place of safe deposit for these valuable collections, now in a state of insecurity."

NEW YORK NEUROLOGICAL SOCIETY.

Stated Meeting, November 11, 1884.

W. J. MORTON, M.D., PRESIDENT, IN THE CHAIR.

SPINAL CONCUSSION AND THE NATURE OF ITS SEQUELÆ.

DR. C. L. DANA read a paper on this subject (see p. 617).

DR. W. A. HAMMOND said: I agree with Dr. Dana in the view that there is such a thing as concussion of the spinal cord. I agree with him further in the doctrine that it is difficult for us to tell by the symptoms what the exact nature of the injury is that the patient has suffered. But this fact, I think, remains, that there is some injury which the spinal cord is capable of suffering, which is not of such a serious character as to cause death, and which is not accompanied by any injury to the bones, or to the muscles or ligaments. That after all is the practical point.

Dr. Hammond then related the history of two cases of spinal concussion in which he had been called as an expert. The first patient suffered from muscular weakness, spinal pains, severe general nervous symptoms, and walked with a peculiar paralytic gait. There was no positive evidence of organic disease of the spinal cord. He received large damages, but he still, twenty years later, suffers from his trouble. The second case, of a somewhat similar character, made a better recovery, but still walks with a cane. Dr. Hammond thought that this patient suffered from some organic disease of the cord.

The speaker referred to the first case which occurred in this country in which a post-mortem was made. The patient was a physician, who fell on the ice and suffered from the symptoms of antero-lateral sclerosis. On post-mortem, sclerotic patches were found throughout the spinal cord. I think traumatism may give rise to spinal affections without there being any palpable lesion of the soft parts, or of the bony structures, or the ligaments.

Only a few days ago I was called to the upper part of the city to see the case of a woman who had fallen through a dumb-waiter, a fire-escape, or something of that sort, which barely allowed her to pass in a doubled-up form. She fell a distance of thirty-five feet, by measurement, into the cellar, striking on her buttocks upon the hard ground. There was no fracture. Three months after the occurrence of the injury I saw her. She was still suffering from paraplegia and incontinence of urine, and paralysis. Hypochondriasis and hysteria had also developed to an extreme degree. Yet she is rapidly recovering. I do not think there was any hemorrhage in her case, because I do not think hemorrhages of the spinal cord are recovered from. She suffered not only from motor troubles, but from sensory disturbances likewise; also from atrophy of her limbs, showing that the injury involved the whole segment of the cord, both the sensory and motor parts. Yet she has recovered, and I do not believe, therefore, that in her case there was any destruction of the cord. I cannot conceive that there could have been anything else than a concussion.

Now, I would like to know what it is that happens sometimes when patients lift heavy weights and they feel something give way in the back, and after that they lose the use of their limbs, gradually waste away, and become paralyzed. I have seen such cases. I remember one which came under my observation some years ago, where the patient, endeavoring to lift a heavy window, got his hand in place and lifted with all his might, and suddenly felt something give way in his side. There was no injury there that could be detected by an examination; there was no fracture; no dislocation. And yet that patient gradually lost the use of his legs. What was that? Probably a rupture of some of the fibres of the cord or of the membranes of the cord; certainly an injury to the cord and not of the bony structures about it.

I cannot conceive of the possibility of getting rid of these facts, that the spinal cord is capable of suffering injury, without there being any detectable lesion of the soft parts, or of the bones, or of the ligaments, or intervertebral substance, and that the trouble inside of the spinal canal involves the spinal cord.

DR. CORNING related the history of a case in which partial impotency persisted long after the accident, and in which there were marked suicidal tendencies. There was not a trace of external injury.

DR. ROCKWELL considered that organic or structural conditions seldom followed concussion of the spinal cord. Notwithstanding the fact that at the present time he had under his care a young person who was suffering from typical myelitis, ascribed to a severe fall followed at once by incomplete paraplegia, which had gone on to complete paraplegia, it seemed almost incredible to him that a person could have severe concussion of the spine without the cerebro-spinal system in its entirety being involved. In concussion there seldom could be a rupture of the vessels or nerve-fibres without causing death. The majority of cases of concussion that had come under his observation had presented symptoms as manifold almost as those of neurasthenia. The prognosis was generally good, and the best remedy time. The concussion that follows the blow of a bullet was frequently observed during our war.

DR. HAMMOND added a case of railway injury, in which there was no lesion whatever of the external parts apparent; but there were ocular disturbances (which he thinks are rare, as Dr. Dana says). The patient had double vision; congestive disks; bird vision; and suffered from the symptoms of neuro-retinitis, but they eventually disappeared. He had marked paralysis of the nerve on one side. He was injured in the upper part of the cord; suffered from loss of power in his arms and legs. Had head symptoms, was hypochondriacal and hysterical. He recovered a very large sum from the railway company.

DR. WEBER remarked that from what he had seen and read upon the subject, it seemed to him that Page was certainly stealing a march upon Erichsen with regard to the views which Erichsen entertains. As I said in a paper read before this Society upon another subject, the more we shall get into the habit of including a thorough examination of the cord and its meninges in post-mortem, the more our knowledge upon the demonstrable lesions will increase, and the less we shall hear in the course of time of concussion of the spine. I do not mean to say that there is no such thing as concussion of the spine, but I believe that a good many cases which are considered as such are not (in spite of the symptoms pointing that way) dependent upon concussion of the spine, but upon concussion of the brain. Now, the case which has been related by Dr. Hammond, of the woman falling down a dumb-waiter, thirty-five feet, and striking upon her buttocks—taking it for granted that there was a complete absence of all injury to the soft parts and to the ligaments and bones, as Dr. Hammond stated—is a case more of concussion of the brain than of concussion of the spine.

DR. HAMMOND: To this I can only say, that there was no cerebral symptom—that was my understanding—in the early part of the disease.

DR. WEBER: There may have been, though.

DR. HAMMOND: I understand not. She never lost consciousness for a moment. I cannot conceive of concussion of the brain without loss of consciousness.

DR. WEBER: In an abstract of a large number of papers that I read recently, in a volume of Virchow-Hirsch's *Jahresbericht*, I found that most of the leading physicians abroad believe that many cases of so-called concussion of the spine, without any injury to the soft parts or the bones, really depend upon concussion of the brain. Some years ago I saw, at the St. Francis Hospital, a case precisely like the one related by Dr. Hammond. It concerned a young man who had been trying, on a wager with some other man, to lift heavier and heavier weights. While still straining he suddenly felt something give way in his back. He fell down and lost the use of his limbs. When I saw him, two weeks after the

accident, there was paraplegia of the lower limbs and a paralytic condition of his bladder. He remained in the hospital for some time, and failing to improve, he was at length discharged. I look upon this case as one of apoplexy of the spinal cord.

Dr. Roberts viewed the diversity of opinions as showing a manifest want of conception of fundamental ideas in regard to the subject. He considered the problem one of physics; dealing with a material object, and the forces acting upon it. Among the queries propounded occurs this one: Is it possible for the spinal cord to become concussed without injuring any of the hard parts of the vertebræ? Now, what is a traumatism? What is concussion? The effect of blows upon hard, and upon soft or elastic substances, is very different. And we have every reason for believing that this effect differs upon the hard and soft parts of the human body; for the effects considered from the physical standpoint are the same, so far as the mechanical effects are concerned. Vibratory impulses, we find, are conveyed with much greater facility along a hard wooden beam than they are through the atmosphere. Now, if we saw the beam in two and interpose an elastic buffer, it will be found that the sound will not be transmitted; a physical barrier to the transmission of these impulses has been interposed. I may summarize two or three principles which underlie this problem by stating that the harder the substance and the more direct its continuity the greater is its conductivity to jars, to vibratory impulses, to injuries. When a human being is thrown from a vehicle and strikes upon the ground, the force with which he is carried is represented by the rapidity with which the body is moving and its bulk. Now, it took a certain amount of force to set his body in motion, and it would take an equivalent amount of force to arrest that motion. When he strikes against the ground this motion is arrested; he must meet with a force equivalent to that which is represented by his momentum. The force is thus annihilated and is expended upon the jarring. How can these vibratory impulses affect the individual? We must examine the hard and soft parts, and the attitude of the individual, and from our examination of inert physical substances, we have reason to go at once to the bones for the channel through which these vibratory impulses can most readily be conveyed. The attitude of the patient at the time the blow is received is an important factor in determining the probable amount of injury. If the skeleton is erect and the patient is thrown forcibly upon his feet in the erect attitude, the resulting injury will be much greater than it would if he were in a crouched position. But then, in this stooping attitude, the limits of the elasticity of his muscles, and the limits of the elasticity of the flexure, may be exceeded when the blow is so severe as to overcome the power of the muscles to maintain this protective attitude. Another important factor to be considered is: whether the patient be fat or lean, for we are dealing with a physical problem. Elastic substances are always the materials with which we annihilate or absorb vibratory impulses. Strike a living skeleton, such as you see in our museums, forcibly upon the breast, and you produce a shock that may result disastrously; whereas a blow upon a well-developed pectoral muscle is received with impunity.

Dr. Græme Hammond did not think that there was any question at all that cases of congestion of the spine and symptoms referable to the cord alone did appear after the spine had been in receipt of an injury. He thought the question of the greatest importance was: What is the nature of the trouble with the spine? whether it is a morbid change which goes on progressively, or whether it is simply functional.

Dr. W. O. Moore stated that there were two classes of cases met with in ophthalmic practice. The first is that which me meet with merely upon the receipt of an injury to the spinal cord, viz., cases in which there was an increase in the circulation of the optic papillæ, and cases where there was decided neuro-retinitis. In one case there was atrophy of the optic nerve. Whether concussion took place as claimed by the history of the patient he could not decide, but two cases in his history book give decided evidence that concussion of the spine did occur. In one case the patient fell from the second story, striking mostly upon his feet and buttocks. His general health was at once affected, and he was not able to attend to business thereafter. He had more or less neurasthenic symptoms. Two years later failure of vision was noticed, from ordinary atrophy of the optic nerve. Color-blindness then appeared, first for red, then for green, then for yellow and blue, and then it was entirely gone. After ten years' failure of vision he is now totally blind, and has no symptoms of locomotor ataxia or anything of that sort. In the other case, the patient was thrown from his seat on a wagon and fell in a heap, without striking any particular part of the head. Atrophy of the optic nerve took place on one side. The case was under observation about two years, until finally the atrophy was complete and there was total blindness of that eye. In the other eye he did have for several days, two or three weeks after the injury, a flushing of the optic disk. At one time it was feared that it would likewise become atrophied. The last case was considered by some eye men rather a case of concussion of the optic nerve. That there is a connection between the symptoms of the spinal disease and the eye, there is no doubt. We see it causing atrophy of the pupil, and later on contraction of the pupil. He thinks there is no doubt a connection between the sympathetic and medullary fibres which go to the pupil. In these cases there was no direct blow to the eye nor head, and no laceration or contusion of any soft parts.

Dr. Dana considered Dr. Moore's cases extremely interesting, because they contradict entirely the very positive statements of Mr. Page in his work on "Injuries to the Spine." He then read the following letter from Dr. Allan McLane Hamilton regarding this subject:

"While I have been satisfied, from a very varied experience in court and elsewhere, that the vast majority of those who claim compensation for railway injuries are malingerers and impostors, I still find that nervous shock is quite apt to develop a 'railway hysteria' in some, which is in every sense a real disease, and is due to actual physical disease, and in others to the development of a morbid expectant attention. It is unnecessary to adopt the extreme opinion of either Erichsen or Page. There is in sixty per cent. of the cases an intermediate condition in which subjective symptoms are the only ones. In some of these cases the hemianæsthesia, lately described by Putnam, may be detected by abstract tests. In others we are furnished with vague yet unmistakable disorders of a functional yet serious nature. I strongly disprove of the injustice of juries who manifest an assinine disregard of scientific proof, and award enormous damages because of prejudice against corporations, simply upon the story of the plaintiff. On the other hand, there are cases turned out of court when some award *should* be made. I do believe that in the great number of well-established cases of railway hysteria, that *moderate* verdicts should be rendered, just as they are in punitive libel cases when the peace of mind has been hurt. In the majority of cases no speculative damages should be allowed upon a simple personal relation of symptom."

Dr. J. G. Johnson, of Brooklyn, asked Dr. Moore whether, in the case he mentioned, there was a connecting train of symptoms that showed that the blow did the injury.

Dr. Moore replied that the man who fell from the wagon was seen thirty-six hours after the injury. He had failure of vision from the very beginning; in that case he had flushing of the optic nerve, and decided symptoms of neuro-retinitis. This gave way after a period of two years, and atrophy developed. In the other case, where the patient fell from one story to the other, the patient

had double optic atrophy, which of course may have arisen from other causes. As far as I can get the evidence from Dublin, it was a decided case of concussion. As he remembered the case it began some years after the accident.

Dr. Johnson asked if there was an early history of the case?

Dr. Moore said there was not. It came on some years after this trouble. He had no evidence of locomotor ataxia.

Dr. Harwood remarked that, out of a number of sufferers from railway accidents, he recalled two cases of spinal concussion. He advised the patients and the corporation to settle amicably. But his advice was not taken in either of the two cases, and they finally went to trial. His view was sustained by the jury, and a verdict was secured for the plaintiff; but what is very unusual in these cases, as he had observed them in suits that had been brought, these patients ultimately died from the results of their injuries.

Dr. Adams observed that most of the cases that showed any injury after a concussion generally showed it in the lower extremities. Many cases of Pott's disease were recognized by most authorities to be caused by concussion. It would appear that the milder injuries caused ordinary concussion of the spine, and more severe ones Pott's disease.

Dr. J. G. Johnson: I only wish to say that a fact which would militate against any such hypothesis as that is, that in the case of vertebral caries, which, according to this theory, is supposed to result from more severe injuries, we have none of the symptoms of spinal concussion. I merely want to ask the neurologists one question, and that is, if they have ever seen a case of spinal concussion in a railway employee (who takes the risk of the conveyance) without the physical symptoms showing either meningitis or myelitis? These anomalous symptoms, which are laid down by Erichsen with such fluency of language, I have never seen in my twenty-five years' experience as a railroad surgeon. I have never seen a single railway employee have them. And for this reason: Dollars and cents do not enter into the consideration of the railway employee. He has every inducement to get well; he has his family to support; if he does not get well in a reasonable time he goes out, and somebody else takes his place. On the other hand, the man who has been on a railway train, who has a good shaking up and a terrific scare, has no object in getting well. The company has got to pay him roundly; it has to pay him for his loss of time; it has to pay him for his suffering, both mental and physical; it has to pay his surgeon also; his surgeon has an unknown quantity to handle; he has something to treat that the patient does not understand. If the patient has a broken leg he knows what he has got, and the doctor cannot come in and discuss spinal concussion symptoms, and all that. He has seen broken legs before; has had cold extremities, vomiting, exhaustion, and so on; but he has not had the scare of a doctor coming in, feeling up and down his back to see whether it pains him, and asking him whether he can stand on his legs, and going through all those symptoms, that unknown quantity which they know so well to do. He has not had some confrère to come in and suggest some more doubts. The doctor, in a good many cases, is hungry, and the big corporation may pay his bill. He has to examine that back often; he has to find out just what these doubtful things mean; and the patient, having it iterated, and reiterated, and reiterated again, begins to believe himself that there is something terrible the matter with him. He does not dare to go out and take a little fresh air and exercise (which, as my friend, Dr. Hammond, says, is the best thing to restore the nerves), because a railway man might be around and spy him using his limbs. He gets morose, and has no object to get well, because that suit is not settled. He begins to have some motor disturbances; he has these profuse sweats, etc. When you come to take that kind of disturbance—of expecting to recover from the company—out of the question, they get well very frequently with indecent haste.

In regard to the claim of destruction of the virile power, which has been alluded to here by one of the speakers this evening, that is one of the most common allegations that have been made in these cases. I reviewed that point in a paper on "Railroad Injuries," read before the Medico-Legal Society.

I think there is no doubt that serious lesions of the spine and spinal cord do occur as the result of railway concussions. We have also mingled with it a large variety of other symptoms. When a train is suddenly stopped, the patient is violently thrown backward and forward, shaking up all the viscera, and the whole sympathetic nervous system, and the other organs suffer. Added to that this terrific fright and the utter helplessness of their condition and the effect upon the mind is something which is severe. But with all that, when you come to consider the fact of compensation, we find these cases so much aggravated that I do not think any physician is right to go into court and swear that the patient has disease of the spine unless he has the physical symptoms, and he should not simply relv upon the statement of the patient, who is interested to make matters as bad as he can.

I saw an extremely interesting case some years ago, which was the result of a railroad disaster on the New York Central Railroad. The patient, a lawyer in this city, was in a sleeping-car when it was derailed. He was thrown down an embankment, and I saw him the next day but one. He was in such a condition that he was put on a return train and came to Brooklyn. There were marked contusions of his shoulders, abdomen, breast, back, and hips, showing that he had received a violent rolling over. Some thirty-six hours from the time of his injury his limbs began to fail him. He could walk if he was watching where he placed his foot. If he walked, and you would speak to him, he would tumble over. That increased, and paralysis of sensation followed, until it extended up as far as the ninth dorsal vertebra. There was no shamming about it. I tried electricity; I burned his legs with matches, and things of that kind, which he would not have been able to stand if it had been felt. Dr. Ranney saw the patient on behalf of the New York Central Railroad Company. The case was settled at about twenty thousand dollars. Dr. Ranney based his claim that he would recover on the fact of there being no wasting of the limbs. I at that time held the opinion that it was an extravasation of the blood around the substance of the cord; I did not think it could be in the pith, from the fact of its being limited to the nerves of sensation and not of motion. After that he recovered entirely and thoroughly, and his own physician and myself, who examined him subsequently, failed to find any indication of any physical pain whatever. He recovered in about six months.

There is a point of interest in regard to these spinal cases alluded to by Erb, that I would like to hear about from the neurologists. Men long connected with railway trains, as engineers, after a while lose their snap; they don't get in on time. Finally they show a complete nervous break-down. Erb alluded to this particularly. What change has probably taken place in the old railway employees where there is this nervous break-down, which shows itself by a lack of courage and nerve-power, and by gradual failure? These cases are becoming extremely interesting in Germany, where the railway employees are allowed damages, just the same as passengers on trains, and this old, worn-out railway nervous system is being put in as a spinal concussion.

Dr. Birdsall thought that these cases were a good deal rarer than the general impression would lead one to conclude. The prominence which the work of Erichsen had been given, had led people to look for effects of spinal concussion, and to talk about them a good deal

more than was really admissible from the facts of observation.

He had been led to conclude that many patients had, previous to their concussion, what was ordinarily termed neurotic or neuropathic constitution.

It had been stated by Dr. Weber that many of these symptoms were cerebral. He thought they were developed, probably, as much from fright as from concussion of the spinal cord. On the other hand, he would not be understood as denying the existence of functional, and perhaps something more than mere functional, disturbances of the cord from concussion. There was a good deal of difference between a single shock, a severe shock due to railroad accident, and the continual jarring which went on in a man in the cab of an engine. It seemed to him that in a healthy person, while the former might be readily recovered from, the latter, even of a more moderate character, would prove more injurious, and he should certainly be very careful about classing them in the same group.

Dr. Johnson said the length of time, doubt, and uncertainty of the cases are important elements to consider. As far as a surgeon for a railroad company being affected in his evidence by outside influences is concerned, he would find that truth was the first essential; he would not hold his appointment for twenty-four hours when his company was satisfied that he was not truthful. When we are sent to investigate a case on behalf of the corporation, we make as thorough and as exhaustive an examination as it is possible with the knowledge that we have, and our report is made in writing and goes to the company's office, with everything bearing against us as well as bearing for us. If we misrepresented that case, and this is shown in evidence in court when the case comes to trial, it shows that we are ignorant or dishonest, and our walking tickets are prepared. No man can hold his position as a surgeon for a company who is not honest, because they pay by dollars and cents on an opinion, and if it is not truthful they do not want it.

Luther R. Marsh, Esq., said he was bewildered by the medical phraseology, which transcended that of the legal guild in the magnitude of its technology. If he were to ask the doctors the difference between "the whole of an undivided moiety, and the moiety of an undivided whole" they would understand his meaning, but they could hardly use a neurological sentence that would not send him to his dictionary. When quite a young man he had written an article for a local newspaper, without regard to sense, but simply for the cadence of the sentences. The beginning of that article, which the good people of the town puzzled over with their glasses, ran as follows: "Pedaneous are the gorgeous geoponics of saginated hoplites." But while his big words were without meaning, theirs were not. He had gleaned from them that the spinal cord was certainly capable of injury, without any necessary harm to its bony or other coverings. The paper had seemed to him eminently impartial, steering a midway course between what the transportation companies might call the extravagances of Erichsen, and what suitors for personal injuries might class as the perversions of Page. He had also learned that when a man had been concussed, as the doctors called it, in the nerve-centres, he was never thereafter fully himself again. He did not, however, consider the word "concussed" felicitous. He was pleased to learn from Dr. Roberts that it was a good thing to be fat, and have a shield between one's self and harm. He considered this well shown in Dr. Hammond's case, where the woman was saved by landing on the voluminous natural cushion of her seating apparatus. The insinuation which had been made, that the consideration of the fee could swerve the testimony of the physician, he repudiated, and said that he stood up for the honor of that sacred calling which deals with the mysteries of human life, and which he had always held in reverential regard. From Dr. Dana's paper he had seen that he agreed with Charles Sumner, that what a man most needed was backbone; that wonderful combination which enabled a man to stand erect, and firm, and unbending, in all emergencies.

Dr. Dana: I only wish to say with regard to one or two points that Dr. Johnson raised, first, with regard to employees not suffering from this concussion of the spine; I think he will find the symptoms of concussion of the spine, as delineated by Dr. Erichsen, were described by Dr. Abercrombie twenty-five years before Erichsen wrote, and his classification of spinal injuries would hold good now.

He was very glad that Dr. Johnson brought out the great importance of the malingering element, because it is an important one. Every one knows there is a prejudice in juries against corporations. There are certain courts where a corporation cannot get a verdict any way, at least so the lawyers say. Therefore, I think that in justice we ought to keep that fact of malingering before us as being a very important one indeed.

As regards the trouble brought on in locomotive engineers, he thought that Dr. Johnson would find that Dr. Rigler, whom he quoted in his work on "Injuries of the Spinal Cord," has devoted a good deal of attention to this disease, which he calls sideromorphophobia, or fear of railways. He did not think that it was due to continuous concussion alone, because it occurred in locomotive engineers more often than in the other employees. It seemed to the speaker that the constant strain and anxiety which these engineers suffered were very important elements in producing it.

In conclusion, he said that there was a class of cases that had not been much referred to in the discussion. Nervous and hysterical women, when frightened or injured on a railroad, were very liable to go to bed, and, under the sympathizing influence of friends and the prospect of large damages, develop a functional paraplegia with symptoms of spinal irritation. It was often hard to tell the exact amount of real injury for which the company was responsible. As a rule the companies were unjustly mulcted, though sometimes the trouble became a real one.

NORTHWESTERN MEDICAL AND SURGICAL SOCIETY.

Stated Meeting, November 26, 1884.

E. C. Harwood, M.D., President, in the Chair.

LEAD-POISONING.

Dr. R. C. M. Page read a paper on the above subject (see p. 621), the discussion on which was as follows:

Dr. Flint: In a meeting of this kind it is more pleasant for me to listen to others than to occupy time by my own speaking, but I will with pleasure make a few remarks on the paper. In the first place, as to the name: it seems to me to be a misnomer to call it colic at all, as the colon is not specially involved. It has nothing to do with a spasmodic affection. I consider that it is a neuralgic affection. One curious fact in connection with it is the different way in which it manifests itself in different persons as regards their susceptibility. Out of any given number of persons who are exposed to it, a certain number only are affected by it. I cannot explain this, and do not know that any one has ever been able to do so. Another curious fact in connection with it is its limitation to the extensor muscles. I do not know that that has ever been satisfactorily explained. In many cases the flexors remain unaffected. I think Dr. Page will recollect a hospital case, many years ago, which well illustrated that fact. It was before the elevators had been introduced, and as it was necessary to take the patients from the lower wards up to the amphitheatre, it was sometimes a puzzle as to the manner in which we could do this. I had a patient who had the drop-wrist to a remarkable degree, and he had no power over the exten-

sors. We wanted to take another patient up-stairs, and we took this patient, who was a very muscular man, and raised his hands and gave him a good grasp, which was necessary. Having done this, he took hold of the patient and carried him up three or four flights of stairs easily enough. That case illustrated to a remarkable degree, I think, the fact that the paralysis was limited to the extensors, and that the flexors were exempt. We find sometimes the same paralytic effect on the toes, as connected with their extensor muscles. I can hardly agree with the writer of this paper as to the importance of the diagnosis of the blue line. I cannot cite statistics, but I am accustomed to find it more often than in the data which he has mentioned. It seems to me that in a large number of cases we can distinguish the blue line readily from the discoloration mentioned, and it is often a very useful point in diagnosis. I have been led to think that we neglect the examination of the urine too much. I was led to think so by a case which I saw several years ago with the late Dr. Stoner of this city. It was a case in a child, seven years of age, who had complete paralysis of the flexor muscles of the forearm. I told Dr. Stoner that it was a case of lead-poisoning. He said: "It looks like it, it is true, but it cannot be, for the reason that it is impossible. This child has not been exposed to the causes which produce lead-poisoning. There is no possibility of the child having been exposed to lead." The child at that time did not show the blue line. It occurred to me to have the urine examined. We did so, and sent a specimen of it to Dr. Doremus, and the examination showed conclusively the presence of lead. My impression is that it is now a common practice to examine the urine. It is not a difficult one, surely. The question that arose after we had found out this much was, How did this lead get into the child? After a great deal of inquiry the facts in the case seemed to be these: The child had been accustomed to play with leaden soldiers, and it was recollected that he was accustomed to have them in his mouth. With respect to treatment, I am very glad to be able to concur with the writer of this paper. It seems to be a fact that the treatment formerly consisted of the stereotyped drastic remedies. The writers of some years ago followed a course of treatment that consisted in the administration of cathartics. The French writers on the practice of medicine seem to observe that method of treatment. I think it is also followed by the English practitioners more than by us. I cannot think that it is a rational method. It is injurious to a greater or less extent. I believe the plan that has been indicated in the paper is to relieve the pain by opium, and pay no attention to the bowels, except so far as the moral effect is concerned, or to obviate too prolonged a siege of constipation, and then to eliminate the lead from the system by the iodide of potassium. I cannot, however, but be somewhat skeptical as to its efficiency. I have given it in a great many cases without any good effect apparently, and have been ready to think sometimes that we overestimated its value. In a large number of cases where the iodide of potassium has not been used, they have ended about as well as if it had been used. I simply throw out that idea, however, and do not give it as an opinion.

Dr. Little: In what way is the lead rendered volatile by turpentine? I believe that Dr. Page in his paper said that the use of so much turpentine rendered the paint volatile, and consequently led to its inhalation by the painter. I did not know that any of the paint that was commonly used was volatile enough to be thrown off with the turpentine and inhaled by the patient. It has often occurred to me that lead-poisoning is produced by the use of lead as an astringent. I have never yet seen a case, however, in which lead-poisoning was produced by the use of lead in this connection. Maybe its use, however, is not continued long enough. I have never seen any bad effects from the use of the iodide of potassium.

Dr. Blumenthal: I think Dr. Page has pretty thoroughly covered the whole field. The recognized treatment certainly is that which he has just outlined. It consists, in the first instance, in the relief of pain by an opiate treatment in conjunction or not, as the case may seem to demand, with croton oil, and after that the elimination of the lead from the system by the iodide of potassium. If I am not very much mistaken there often remains a good deal of atrophy after all traces of lead have been eliminated from the system. I have often got a great deal of encouragement by the use of nux vomica and strychnine while using electricity. The tonic treatment that has been pointed out is certainly one in which we all agree. There is a vast amount of difference in the systems that absorb the poisons—that is, some will absorb more poison than others before they present symptoms—and consequently there must be a great deal of difference in the treatment that may be necessary to produce relief. The most probable reason, to my mind, why the right hand is affected oftener than the left is that it is used more by the workman than the other. His right hand is very frequently covered by the paint, and consequently there is more opportunity given for the absorption of the lead than in the case of the left hand. Before the patient feels the effect on his system his limb is likely to be affected. Of course where he is left-handed the reverse would be the case. The point which Dr. Flint raised is a very important one, and that is that we are too likely to look after other symptoms and not pay enough attention to the urine.

Dr. Baruch: I have used very frequently an application of white paint to burns, just as the painters do, quite as thick as I could use it—just thick enough so that I could handle it properly. I employ it in connection with about two per cent. of carbolic acid. I have used this in connection with dilute sulphuric acid lemonade, and I would like to have the question settled here whether there is any necessity of giving a patient this sulphuric acid lemonade while he is being treated with applications of white paint.

Dr. Wood: One idea has struck me in Dr. Baruch's address, and that is whether we do not run a great risk, when we use white paint for several days over a large surface, of producing lead-poisoning; and yet I must say that I have never come across such a case. I have, however, seen the symptoms of lead-poisoning from the use of lead internally. I once saw a case that was called chronic diarrhœa in one of our soldiers of the late war. He had been taking the acetate of lead, and when he came North he continued it for some time; how long I am not able to say. When he returned he had symptoms of lead-poisoning. I believe it is generally conceded that the drastic purgative treatment of this disease is not carried out to the extent that is recommended in foreign works. There is no question but what the soothing opium treatment conduces more to the recovery and convalescence of the patient than a cathartic treatment.

Dr. Dessau: I was quite surprised to hear the writer of the paper speak so disparagingly of the treatment which consisted of the use of alum and sulphate of magnesia. I have used hypodermic injections of morphine to relieve pain also, but the constipation was relieved by the use of sulphate of magnesia and alum, and it was used in very large doses. I used about a drachm of the sulphate of magnesia every three hours. Soon afterward the bowels were relieved. After this the patient is put upon the iodide of potassium treatment, but the constipation in my case was certainly relieved by the use of alum and the sulphate of magnesia, because no other treatment was resorted to. This particular patient had been constipated for a week.

Dr. Fuller: I cannot say anything with regard to the treatment of the case, but the other day I had the opportunity of observing the disease in children of very tender years. The author of the paper did not mention particularly the occurrence of the affection in children,

but only spoke of adults. The cases I saw were the youngest I had ever taken notice of—they were only three or four years of age; they were undoubted cases of lead-poisoning. The history of each case could be traced exactly: Their father was a painter, and the closet in his house contained paint; they contracted the disease from this. They had a great many forms of treatment applied to them without any appreciable results. They were affected both in the upper and lower extremities.

Dr. Leonard: I saw an unusual case while in the Adirondacks, which was diagnosed as lead-poisoning. After the case had existed for some months it was cured by the use of the iodide of potassium treatment. The patient was a hunter who had tried to stop chewing tobacco, and to accomplish this he had put a bullet into his mouth, and the disease was attributed to this cause.

Dr. Little: I would like to ask concerning the use of sulphuric acid as a prophylactic. Dr. Baruch has said that it should be used as a lemonade. I have not had any experience, but I have noticed that it has been recommended by the authorities.

Dr. Flint: There has been one topic which has not been referred to, and that is the relation of lead-poisoning to gout. It has been asserted that gout has followed where lead has been introduced into the system. I would like to ask those present if they have ever known of a case where they could attribute gout to lead-poisoning.

Dr. Chamberlain: Something has been said about hair-washes as productive of lead-poisoning. I recollect a case twenty-five years ago where the disease was produced by this influence. I think it was published in Wood's *New Remedies*. All of the preparations mentioned contained lead, and evidence was brought forth to show that lead-poisoning was produced by the use of these preparations.

Dr. Fruitnight: It has been emphatically stated that other muscles besides the extensors are affected. Last summer a patient presented himself at my office. He worked in Western Pennsylvania. I asked him to strip himself, and on removing his clothing I observed that the muscles of the upper extremities were all more or less atrophied. He had to be assisted in taking off his clothing. He had worked a year in the establishment in which he was at that time employed. I endeavored to find out every possible cause for his condition, but was forced to the conclusion that lead was the cause. I questioned him with regard to other men working in the same establishment, and he told me that a great many of them had suffered from the drop-wrist. Another patient was a printer who had been a very adept workman, but at last he became unable to fulfil his duties any longer as readily as he could before. His muscles became weak, and he had pains and was beginning to waste away. I saw him about two months afterward and noticed that there was no reaction to the electric current either faradic or galvanic. I kept him under the usual remedies for about six months without any effect.

Dr. Page, in closing, said: I have very few remarks to make. In regard to Dr. Flint's cases, where the iodide of potassium failed, it is very likely that the patients did not take it regularly and continued to be exposed to the infection of the poison. In that case they were hardly fair tests. With respect to the blue line, I have nothing more to add. With regard to the remarks of Dr. Little on the volatilizing of the paints by turpentine, I would say that I do not know that such is the case, but believe it to be so. With regard to Dr. Blumenthal's remarks concerning nux vomica, I would say that of course it may be given. I thought that I had included it in my remarks on the general treatment. With regard to the remarks of Drs. Baruch and Wood about painting burns with paint, I do not think that any burn will last long enough to cause the patient to be poisoned with applications of lead, but if it does, I do not think the sulphuric acid will prevent it. I have known painters to take it regularly three times a day and yet be the worst poisoned men of the lot. In reply to Dr. Dessau, I believe that the morphine cured the patient. My point in regard to Epsom salts and alum was that the theory of sulphuric acid acting on the lead in the system is of no value. Concerning Dr. Fuller's remarks about children, I must say that I never came in contact with children that had lead-poisoning, but that all my cases were adults. Drs. Chamberlain and Harwood spoke of hair-washes as a cause of lead-poisoning. I would say that they are said to be a frequent source of lead-poisoning with ladies. There is no way to stop it that I know of except for the ladies not to use them. You cannot make people stop manufacturing them. Consequently if ladies will use cosmetic slops and greases they must expect to suffer the consequences. With regard to what Dr. Fruitnight has said about the flexors, there is no doubt in my mind but what the flexors become affected in time. The reason I think why it does not become more marked in the flexors is because the patient stops work in time. He is not exposed to the poison any longer and is undergoing treatment. I know of no case of gout traceable to lead-poisoning.

Dr. Wylie read a paper (see p. 624) on "Vomiting in Pregnancy," the discussion on which was as follows:

Dr. Baruch had seen one death, in consultation, resulting from vomiting in pregnancy. He had, however, seen death imminent in three different cases of pregnancy, in which he had been forced to produce abortion. He had noticed at that time, after introducing a bougie into the uterus overnight, and allowing the remainder to coil up in the vagina, that there was no vomiting. On such occasions there would be no vomiting, and labor would not come on for two or three days. Two or three hours after the bougie was introduced the vomiting would cease. He attributed this to the fact that the connection between the fœtus and the uterus was disturbed. This dilatation of the cervix was a dangerous precedent, and should be resorted to only in desperate cases. He had used it in one case successfully! When producing abortion he would first dilate the cervix before going on. The pathology was not at all clear. He had two cases of sterility. In both he had succeeded in curing the sterility by dilatation. In one of these cases he had a very bad case of vomiting, in fact as bad as he had ever seen not to be dangerous.

Dr. Powell would like to add one case in support of Dr. Wylie's view. It happened three of four years ago. He met Dr. Wylie on the street, and told him that he had been called in to see a woman suffering from vomiting, and gave the history of this case. It was the fourth pregnancy, and she had never reached full term, and premature labor had to be brought on every time to save her life. At Dr Wylie's suggestion the cervix was dilated at once. Dr. Powell went by no especial rule, simply dilating it until the woman said that it pained her a little. His finger passed in for about half an inch. The result was marvellous. She went to sleep within half an hour afterward, and never had the least trouble with her stomach. She has been pregnant and delivered at full term a second time since.

Dr. Fruitnight said that his brother, the late Dr. William Fruitnight, had a case in which the obstinate vomiting was overcome by means of dilatation of the cervix.

Dr. B. F. Dawson had no experience in it. He had not dilated a cervix in five years, except for the purpose of curetting the uterus. He would like to ask Dr. Wylie how one dilatation will correct disease of the cervix. It seemed to him a dangerous proceeding.

Dr. Wylie did not claim that it necessarily cured the disease, but that it took off the tension and served to relieve any hardening that prevented the tissues from swelling. Dilatation counteracts the disease. He had some doubts, the same as Dr. Dawson, years ago, when he first tried dilatation. These had been dispelled, however, and six weeks ago he was bold enough to dilate here, in his of-

fice, the wife of one of the ministers from Washington, and relieved her vomiting almost at once, which had resisted much dosing by the mouth.

Dr. Dawson thought that cases had been heard from where vomiting occurred simultaneously with pregnancy, and continued right along through it. We all know the effects of warm water, glycerine, and iodoform, and as Dr. Wylie uses these in making his applications, may not they be the means of giving relief?

Dr. Wylie: Hardly; for Dr. Copeman and many others cured by dilatation, pure and simple. As a rule, if you examine women that are pregnant you will find that they have a healthy cervix when they have no vomiting, and when they have vomiting you will find that they have a contracted or an indurated cervix.

Dr. Little said that a friend of his had tried dilatation and found it very good.

Dr. Dawson asked what was the psychological effect that was produced by this act?

Dr. Wylie could not say.

Dr. Copeman: In dilating, intending to induce abortion, there was an accidental delay, and he found that nausea stopped. It happened in a second case, and then he believed that dilatation had prevented it. Quite a number have followed him since then, and established the fact that it can be done safely and satisfactorily.

Dr. A. S. Hunter had no experience with the dilatation of the cervix, but he was very glad of the opportunity of listening to Dr. Wylie's paper, for it encouraged him in the use of that means in the event of the failure of medication. He had lost one case in his professional career from severe vomiting alone. The patient was forty-three years of age, and had vomited a great deal. If labor had been induced she would have died without any loss of blood. He had been successful in many cases by the use of oxalate of cerium and ingurim; five-grain doses of each. It has given prompt relief. He once knew of a woman who the morning after marriage was seized with vomiting, which continued for three months. When delivery came on it was evident that conception had occurred at that time. The patient that he lost died just before he read the paper of Dr. Copeman, and he was very sorry that he had not known of it in time.

Dr. Harrison agreed in most of the conclusions of Dr. Wylie. His only objection to his etiology was that it was not quite comprehensive enough. He had seen one case of obstinate vomiting. He included every case of vomiting, as, for example, any disease of the kidneys or disease of the stomach, and he came to the conclusion that there must be some local cause, and in the case he had in mind he thought he would have to produce an abortion, as the patient was so very much exhausted. Dr. Thomas was added to the list of consulting physicians, and he insisted upon it, said that it was absolutely necessary to induce an abortion, which he did with the effect of curing the patient. In this case the cause of the vomiting was due to peritoneal irritation from previous peritonitis. The uterus was bound down by false adhesions, and afterward she became pregnant. He thought it was the peritoneal irritation produced by the expanding uterus that caused the vomiting. In another case of severe vomiting the patient had taken some pills to bring on an abortion. It produced gastro-intestinal catarrh, and subsequently she had an attack of acute atrophy of the liver, which caused her death. He never saw a worse case of vomiting than that.

Dr. Dawson asked how Dr. Wylie would explain the fact that most women stop vomiting after a few weeks without dilatation.

Dr. Wylie: After a few weeks the cervix may soften to such an extent that the pathological condition which may have existed has been really changed by the softening process which takes place. My experience has been that the dilatation does not necessarily remove the abnormal pathological conditions of the cervix, but relieves the tension that seems to be the cause of the vomiting. That is, according to the experience that I have had.

Dr. Dessau had a case once where a woman called in to see him on account of persistent vomiting. She was then about in the commencement of the ninth month of pregnancy, and she told him that the vomiting had not commenced until about the month before. About four or five years ago a case happened where vomiting terminated with the birth of the child. Here the vomiting came on at the end of pregnancy.

Dr. Wylie said that pregnant women might contract diseases that might affect the cervix, such as venereal disease. He had known of one or two cases where the irritation of the vulva from venereal warts seemed to cause the vomiting.

Dr. Jacobus: In a case at his clinic one of the patients had lacerated her cervix, which had been treated by amputation with galvanic cautery. She did not want to become pregnant, and said that if she did become so she would in all probability miscarry. Later she became pregnant, and was quite put out about it, and was somewhat disposed to blame the treatment for getting her in that condition. It amused her husband considerably. She had practically no cervix, only an internal os. If dilatation would be likely to do harm I should think it would have done so in this instance. Dr. Wylie ought to recollect her, for he sent her to him. She did not succeed in producing miscarriage, and Dr. Wylie dilated her os, and the next day she had some symptoms of miscarriage. After the dilatation she walked home and took aloes pills, and had a flow. Then the husband came around and said that the flowing had ceased. Dr. J. sent back by him some morphine pills. About a month afterward she came around for some pills, and I found that she was still pregnant. She went on, and in about seven or eight months had a child. If dilatation was dangerous and produced miscarriage, it should have done so in that case. He thought that she would have gone the full time if she had had a cervix. She had a flow of water there for two weeks on account of a rupture, yet she was delivered of a child which lived.

Dr. McLaurey had seen some very severe cases, but never a fatal one. The most successful remedy that he could use was morphine and bismuth and caffeine. He had found that to be a very excellent remedy. He had never tried dilatation. In speaking of psychological influences he would like to state this. Occasionally he found a lady complaining that as soon as she becomes pregnant her husband becomes sick. A few weeks ago a lady came to him and said she was pregnant. I said to her: "How do you know you are?" She said, "Oh, as soon as I am pregnant my husband always becomes sick. This is the third pregnancy I have had, and my husband is sick every day." He had heard of this fact before, but he could not explain it, and would like to know if there was any one in this room that could.

Dr. Chamberlain was familiar with the paper of Dr. Copeman, and had employed his methods with satisfaction. He would remind the gentlemen of Dr. Engleman's paper that was published. He was inclined to regard the interpretation of this nausea as a neurotic phenomenon. The cervix is the most important portion of the uterus. Up to the time of birth the cervix is in volume as great as all the rest of the uterus, and up to the time of puberty there is a portion of the uterus that is between the reflection of the peritoneum on the bladder and on the rectum and the vault of the vagina; a portion between those is of the same volume as the uterus. The lower portion of the uterus is thrown down, and the upper portion is thrown off. The cervix is the active portion of the uterus. It is through that portion that the nerve supply reaches the uterus, and it has been observed that the neurosies (?) of the uterus are connected with the cervical portion. He had dilated the uterus repeatedly where he had attempted to bring on delivery in cases of convulsions, and as often as he had done that

thing he had found that the convulsions had ceased. Repeatedly, and he thought constantly, in every case where he had employed this dilatation of the cervix to suppress vomiting in pregnancy, it had been successful. He recollected a case in which a lady had a small fibroma on the posterior wall of the cervix. It acted like a kind of a ball-valve over the os internum. In that case he dilated the cervix and the vomiting stopped and did not return. He was convinced from experience that while undoubtedly such cases as Dr. Harrison has cited, where there is a palpable structural change, and this may become the cause of vomiting, and also in Dr. Wylie's cases, where he describes disease of mucous membrane, the treatment should be that of the mucous membrane. He was confident, nevertheless, that the kind of spasm which was remedied by the process of dilatation was the cause of a great many cases of severe vomiting in pregnancy.

Dr. Wylie had nothing to say, but admitted the paper was not as broad as it might be, as Dr. Harrison said, and it was drawn strongly in one direction so as to bring this point out: that local treatment can be given without great risk, and is in most cases the best, and in some the only, means of giving relief.

The Society then adjourned.

Correspondence.

OUR LONDON LETTER.

(From our Special Correspondent.)

PULMONARY SURGERY—A NEW UNIVERSITY FOR LONDON—SMALL-POX AND CHOLERA—SURGICAL SCARLET FEVER.

London, November 15, 1884.

At the last meeting of the Medico-Chirurgical Society a brief but interesting discussion took place on pulmonary surgery. Dr. Cayley showed a specimen of cancer of the œsophagus associated with a pulmonary cavity. The cavity was tapped during life by means of a trocar and canula. It was found at post-mortem that the pulmonary cavity was in communication with the cancerous tract in the œsophagus and stomach, and that the fluids from the diseased area passed into the cavity. The case was obviously one in which a cure could not be expected; but the operation afforded the patient great relief by obviating the fetid expectoration from which he had been suffering. The case also shows that the lung can be tapped without much danger. In this case several punctures were made, without success, in various directions before the cavity was reached, and the patient had not suffered therefrom.

A proposition is on the carpet to found a new university for London. London's present university occupies the anomalous position of being merely an "examining board," though in this respect it performs its functions so hypercritically as to rather deserve the name *dura*—than *alma*—*mater*. It also stands in an isolated position without any very direct relation with medical and other colleges, and with practically no control over the teaching its alumni receive before presenting themselves to receive its official stamp. It is now proposed to found a new organization, with several faculties, with complete university teaching, supervised by the university authorities, and to bring it into close relation with existing institutions. An attempt will be made to merge the present in the new university. Active support is already promised from influential quarters. The Council of Legal Education will, it is believed, support the scheme. Earnest support may be expected from the medical schools and corporations. The Normal School of Science at South Kensington may also not improbably throw in its fortunes with the new scheme.

There is reason to fear an increase in the small pox epidemic as the winter comes on. The number of cases under treatment in the hospitals, etc., of the Metropolitan Asylums Board has again increased. The number of new cases admitted last week was more than double that of those admitted the previous week, viz., two hundred and thirty-three, as compared with one hundred and one.

The outbreak of cholera in Paris suggests the possibility of one here; but we can as yet show a clean bill of health.

At the last meeting of the Medical Society of London an interesting paper was read by Dr. De Haviland Hall on the subject of "Surgical Scarlet Fever," and was followed by a lively discussion. Several speakers doubted whether such cases were really scarlet fever, and it was suggested that the eruption might be really a rash due either to the shock of the operation or resulting from the anæsthetic used. No speaker ventured to defend the view that the performance of a surgical operation can originate such a disease as scarlet fever. Dr. Hall thought the poison had been absorbed before the operation, but that it would not have manifested itself so soon (in this case on the day following the operation) unless, as Sir J. Paget says, the health had been disturbed. Sir J. Fayrer, Mr. R. W. Parker, and Mr. Durham all regarded the case as one of scarlet fever. Mr. Parker remarked that his experience at a children's hospital had taught him that the occurrence was by no means rare in surgical cases which had recent wounds, and the scarlet fever might be very severe and the wound take on fresh action.

ON LARGE DOSES OF THE POTASSIUM IODIDE IN THE TREATMENT OF THE LATE LESIONS OF SYPHILIS.

To the Editor of The Medical Record.

Sir: In The Record of the 22d ult., p. 584, Dr. J. S. Crawcour, M.R.C.S. Eng., refers to an editorial on Dr. Seguin's article in the *Archives of Medicine*, on what is claimed to be the American mode of using the iodide of potassium in the late lesions of syphilis. In this article Dr. Seguin is quoted as claiming that the practice of giving very large doses of potassium iodide in certain cases has been in vogue for over fifteen years. "By large doses is meant such as make up a total of two and a half to ten grammes in twenty-four hours." Dr. Seguin is shown to have claimed that this practice originated with the late Dr. Wm. H. Van Buren, about fifteen years since, and that "it has received slight or no adequate notice in text-books," and that "it is only in the works of Loomis, Bartholow, and of Van Buren and Keyes, and Bumstead and Taylor, and of Buzzard, abroad, that any recognition of it is found."

Dr. Crawcour objects to the claim made by Dr. Seguin, that the administration of large doses of potassium iodide in the late lesions of syphilis originated with the late Dr. Van Buren, and thus was of American origin, and quotes a prescription made by himself in 1859, which calls for one drachm of the potassium iodide to be given four times in the twenty-four hours. He says: "It will thus be seen that the method of giving the iodide of potassium in large doses is by no means a New York method, but was used in New Orleans twenty-five years ago, and as," he says, "I had only been in this country five years, it might be more correctly termed an English method." It appears to me that Dr. Crawcour is quite justified in assuming this as far as any statements made by Dr. Seguin are concerned. Dr. Seguin was in error not only in attributing to Dr. Van Buren the credit of originating the plan of treatment of late syphilis by the iodide of potassium in large doses, but in his statements as to the comparative ignorance of the profession at large in regard to it, and also that "it is only in the works of Loomis, Bartholow, and Van Buren and Keyes, Bumstead and Taylor in this country, and of Buzzard abroad, that any recognition of it is found." According to the definition previously given of *large doses*, anything above two and a

half grammes, *i.e.*, about forty grains, may be considered as coming within the meaning of the term.

Ricord, in 1835, says of the treatment of the late lesions of syphilis by large doses of the iodide of potassium: "Two scruples may be given at first, in three doses, in the course of a day; fifteen grains should be added every five days until one and a half drachm (about five grammes) are taken a day, which I have rarely gone beyond." This passage occurs in the work of Hunter and Ricord (on Venereal), of 1835, and may be found in an American edition of the same edited by Dr. Bumstead, in 1853, p. 470. Acton, of London (1860), quotes the above with approval. Lancereaux, of Paris (Sydenham edition, p. 320), says: "The doses in which iodide of potassium is given vary from seven and a half and fifteen grains to forty-five, sixty, seventy-five, and ninety grains in twenty-four hours. Some practitioners carry the dose to *one hundred and fifty, one hundred and eighty, and two hundred and twenty-five grains or even more.*" Beaumler on syphilis, in "Ziemssen's Cyclopædia," vol. iii., p. 297, says of the use of iodide of potassium in the treatment of late syphilitic lesions, "even thirty or forty-five grains several times a day must be given to attain a cure."

Mr. Coulson in his treatise on "Syphilis" (London, 1869, p. 242), says: "Many of the severer forms of late and visceral syphilis will require one drachm, or even larger doses, three times daily."

Hill and Cooper (London, 1881), in their work on "Syphilis and Local Contagious Disorders," p. 414, say, of the iodide of potassium: "Forty to sixty grains three times a day will sometimes quell an obstinate syphilide which has resisted smaller quantities, *but* larger doses than these may be required." I would also refer to my own book, published in 1883, p. 143, where the use of iodide of potassium in drachm doses in certain cases, and its continuance for a long period, is advised in the same connection; the method of its administration is distinctly indicated. At p. 199 et seq., a case of cerebral syphilis is cited in illustration, where drachm doses of iodide of potassium were administered for several months with apparent cure, and when the withdrawal of the remedy under other care, apparently, resulted in the death of the patient.

Inasmuch as, besides this, I have for the past twenty-five years taught this plan of treatment for the late lesions of syphilis in my clinic at the College of Physicians and Surgeons, and also for the past ten years in my wards in Charity Hospital, I would like to be included among those who were credited with having aided to some extent in spreading the knowledge of its great value in this country. I would like also to say that while there seems to me to be some question as to the good taste in claiming the plan of the administration of large doses of the potassium in cases of the late lesions of syphilis as an "American plan," there can be no question that it has found its earliest and warmest advocates and teachers among American physicians.

Dr. Seguin claims from personal inquiry that Dr. Draper recognized its value as early as 1865—nineteen years ago. In the same way, he states that Dr. Keyes recollects Dr. Van Buren as teaching it as far back as 1863—twenty-one years ago.

Dr. Taylor tells Dr. Seguin that he has accepted it ever since he heard it taught by Dr. Draper and Dr. Van Buren in 1866. This brings Dr. Seguin to the conviction that the plan is a purely American one, and was instituted by Dr. Van Buren. Dr. Seguin is in error.

Dr. William Kelly was Physician-in-Chief in Charity Hospital, Blackwell's Island, N. Y., from 1848 to 1853. He was a man of marked ability and thoroughly interested in all advances in medical science; and was an especial admirer of M. Ricord, and in harmony with his views on the treatment of syphilis.

In 1851 and 1852 I was an interne in that hospital, together with Professor Loomis (who is cited as approving the potass. iodide plan), also Dr. William Chamberlain, now one of the Visiting Physicians to Charity Hospital, Dr. J. W. Barstow, of Sanford Hall, Flushing, and others. The plan of treating the late lesions of syphilis with large doses of potassium was then in vogue in Charity Hospital, thus thirty-three years ago. Dr. Kelly, then Physician-in-Chief to Charity Hospital, was also a lecturer on Venereal Diseases at the College of Physicians and Surgeons, New York, at that early period, and taught the foregoing plan in the college and in the wards of Charity Hospital.

After Dr. Kelly's death his private case-books came as a valued legacy to me. Among the cases in book E., 1852, on page 6, I find the following: "Ulcers, syph. phagedenic, by large doses of iod. pot. Mary N—— was admitted to hospital February 14, 1851; had secondary eruption and enlarged glands and falling of hair in 1849. . . . At time of admission body was covered with ulcers, some rupetic and some ecthymatous. . . . Was put on generous diet, morphine, and iodide of potassium. This latter was carried up to two drachms per diem. Under this patient got apparently well, and was discharged September 1, 1851. Was readmitted to hospital one month after with ulcers on ankles. Periostitis of tibia occurred; surface over it ulcerated; treated with poultices and iodid. potass. Local applications—creasote ung., tabaci, nit. arg., etc.—failed to relieve pain. Iodide of arsenic was tried until its inefficiency was proved. Mercury in small doses. Patient all the time on ale and good diet.

"April 26, 1851.—Determined to try iod. pot. in large doses. The ordinary doses up to ʒj.–ʒij. had failed. The dose was then gradually increased, so that she took ℥ ss. of the salt each day. She began at once to improve. Pain ceased in two days, and healthy action of ulcers set in. She sat up for half a day on May 5th for the first time in four months. Now—May 11th—can sit sit up all day. Has taken six ounces of the iod. pot. to this date."

There are in the same book several other cases reported in full, which are in complete accord with the one quoted above, showing that this was the accepted practice in Charity Hospital at that time. I would then claim for Dr. Kelly the priority in systematically and successfully treating the late lesions of syphilis by means of large doses of the iodide of potassium and of teaching this method in public.

There seems to me an important difference of opinion between the editor of THE RECORD and Dr. Seguin, whose paper on the "Dosage of Potassium Iodide" was the original subject of comment, in regard to the best mode of administering the drug. Dr. Seguin states that a singular unanimity prevails among authorities in advising that the iodide of potassium should be taken *after meals* —he states that no good physiological reason can be given for this rule, and he says, "I strongly suspect that it is nothing more than the blind following after example." He therefore advises that it be always given upon an empty stomach. The editor of THE RECORD disagrees with him, and advises pursuance of the rule advised by authorities. The reason why the drug is usually given after meals is, I think, because it is less likely to produce irritation of the mucous membrane of the stomach.[1] It occasionally happens that, even when every possible care is taken, such disturbance of the stomach results that the use of the drug has to be discontinued. The life of a patient may depend upon his ability to bear a certain amount of the iodide. A very moderate experience with

[1] I have at present under my care a worthy and very intelligent member of our profession suffering with grave ulcerations on the throat from late syphilis. The original trouble was acquired in attending a syphilitic woman during confinement. The ulceration continued to progress until drachm doses of the iodide of potassium were taken every six hours. This amount (ʒj.) was administered *after meals* in an ounce of water, and followed quickly by a tumbler of milk. On being questioned yesterday as to the effect of these large doses on his digestive apparatus, he said, "My appetite and digestion are excellent. My stomach bears the iodide much better when taken after food. I do not feel the effect of *sixty* grains at a dose as much as I formerly did *fifteen* grains, well diluted, but on an empty stomach. The only time I feel any tendency to nausea is just after the dose I take at one o'clock A.M., when I follow it with a tumbler of milk, but on an otherwise empty stomach."

the use of the iodide of potassium in large doses will be sufficient to prove the increased tolerance to the drug when administered largely diluted with some bland fluid as milk, or some mucilaginous decoction; especially when administered after a meal. Beginning with eight or ten grains, the gradual increase, say by a grain or two (or even three in an emergency) at each dose, and taken with, or immediately followed by a tumbler of milk or gruel, preferably after a meal, has proved in my experience the most free from danger of irritating the stomach. I have recently had a case under my care where ʒ xij. were thus administered in twenty-four hours, for three months, without disturbance of the stomach, and with the effect of relieving almost completely a serious paralysis of the bladder and rectum, following constitutional or active syphilis. This is the largest amount I have ever administered in a case during the same time The assertion made by Dr. Seguin, that "*iodism is in nowise dangerous, and is only an inconvenience and a drawback to treatment*," is scarcely justifiable when a moderate amount of iodide of potassium will sometimes cause such irritation and swelling of the mucous membrane of the fauces and air-passages as to place a patient's life in peril. Such a case is quoted in Hill and Cooper, page 425, when tracheotomy was required to save life. I have myself seen the same accident, threatening death from œdema of the glottis, when only twenty grains of potass., thrice daily, were being administered.

F. N. Otis, M.D.

108 West Thirty-fourth Street, New York, November 23, 1884.

MR. LAWSON TAIT AND LISTERISM IN OVARIOTOMY.

To the Editor of The Medical Record.

Sir: I have just seen in the columns of your valuable paper a paragraph headed "Another War over Listerism and Ovariotomy," in which you extract from Mr. Thornton's letter in the *American Journal of Obstetrics* certain figures which Mr. Thornton supplies on behalf of Dr. Bantock and myself. I can safely leave Dr. Bantock to deal with his part of the question. Concerning my part I can only say that I am not responsible in any way for any figures which Mr. Thornton may credit me with. So far as I can make out, Mr. Thornton's present figures are those which he manufactured for me on a previous occasion, and which require to be corrected as follows:

	Cases.	Deaths.	Mort. per cent.
Clamp (non-Listerian)...	36	9	25.0
Clamp (Listerian).....	26	7	27.0
Ligature (non-Listerian)..	209	6	3.0
Ligature (Listerian).....	30	2	6.6
	301	24	8.0

From this statement it will be seen by any one who can reason on the subject at all that so far as my practice is concerned Listerism has no effect one way or the other, and that the heavy mortality in the early part of my practice was due mainly to the clamp, assisted of course by the factor of want of experience, which always tells. Mr. Thornton lumps my non-antiseptic cases together, and ignores the fact that they contain this heavy clamp mortality. This he does, of course, because the question between us is as to whether it is the clamp or not which has been the root of all our evil. The suppression of the further dissection of my statistics which I gave is not honest, particularly after the discussions which have already taken place on this subject. The concluding sentence of your paragraph says that "it is known that Mr. Tait, when still a rising variotomist, was hardly treated with fairness by the London gentlemen whom he now in his triumph too rancorously assails." I am sorry that I am too rancorous on the subject, and for the future I shall endeavor to modify my expressions within limits which I trust may seem to you to exclude rancor; but if you knew in what manner I have been assailed, what vile charges have been made against me behind my back by Mr. Thornton and others, which they never dare even to hint at in public, you would, I think, agree with me that no kind of language could be too rancorous in dealing with such men.

Your obedient servant,

Lawson Tait.

P. S.—I am just closing my first thousand cases of abdominal section, and as soon as I can I shall send you a summary of conclusions, and after that I shall trouble myself not a brass farthing about Listerism or its advocates. L. T.

Birmingham, Eng., November 14, 1884.

TRACHEOTOMY IN CROUP.

To the Editor of The Medical Record.

Sir: In The Record of November 15th there appeared an interesting and forcible article by Dr. Simon Baruch, advocating an early operation in membranous croup, and giving as a basis for his argument the clinical histories of three cases. I cannot but dissent from the conclusions of the author, because I believe that, if tracheotomy were generally performed early in croup, many children would be unnecessarily subjected to it, and cures which would have been either spontaneous or the result of medical treatment attributed to it. To do the operation early one must often do it almost at the onset of the symptoms, for frequently only a few hours find the patient in great danger from asphyxia; while often the symptoms which have seemed so threatening as to warrant an operation may yield and the patient recover.

From choice or necessity, most operators do tracheotomy in cases of imminent danger, and are actuated, I think, more by the desire to relieve the patient, if only temporarily, from the fearful suffering which even they cannot witness with equanimity, rather than inspired by any great hope of saving life. I do not think that clinical experience bears out the belief that a late operation prejudices its success, for the patients seldom, if ever, die of exhaustion. The almost invariable history of those who die is that they succumb to an extension of the disease below the tube, or to the general effects of the disease, or worst of all, to the accidental stopping of the tube.

I believe, therefore, that while he who operates as a last resort occasionally saves a life, the early operator does the operation, in some cases at least, which would have recovered without it. I am greatly strengthened in this opinion by having observed several cases of membranous croup recover without tracheotomy, whose condition seemed most desperate. One expelled the membrane in a large cast, while in a hot bath into which it had been placed while almost completely asphyxiated, and two recovered under a plan of treatment which I will now describe, while giving the clinical history of the most recent case. I will premise by saying that the other case alluded to only differed from the one detailed in that the patient was a year older. Both were in a condition which would have justified an operation, and in both cases I am sure their cure, had it been done, would have been attributed to it. I was called to see the patient, a little girl, W——, two years of age, on the evening of November 15th, and found that she had been ill all the week, and croupy for two or three days. The parents had not considered her condition dangerous, however, until a few hours before I saw her, nor had any treatment been used. I found her breathing with the greatest difficulty, 50 to 60 a minute; the pulse, 140; and episternal and abdominal retraction well marked. Inspection showed diphtheritic patches upon the tonsils, and everything indicated a speedy asphyxia unless relief could be

obtained. I was deterred from advising an immediate operation by the fact that at two years the prospect of success is not flattering, and by a lingering hope inspired by the previous case, that the relief might perhaps be obtained by other means. I must confess, too, that, having done tracheotomy for croup seven times, with only one successful result, I am not as enthusiastic in its advocacy as I would be had I saved one in three.

To return to the case in hand:

I ordered equal parts of powdered alum and sulphur to be blown into the throat at the moment of deep inspiration (from an insect powder blower) as often as asphyxia threatened.

This was done, and the child struggled through the next thirty-six hours, expelling shreds of membrane after the insufflations at frequent intervals, until at length, on the fourth day, the respiration, though somewhat difficult, was much deeper and freer, and all membrane had vanished from the throat in view. The child has now been quite well for several days. I am not an enthusiastic therapeutist, and hardly thought of this as an efficient treatment for true croup, until this last and desperate case yielded to it.

What convinces me, or at least leads me to hope, that it may really be a means of combating the disease, is the fact that its use leads palpably and obviously to the expulsion of the membrane, and this makes the cure seem a logical sequence, rather than a lucky chance.

I desire expressly to disclaim any idea of originality in calling attention to this mode of treatment for croup, my only desire being to secure for it a fair trial. Let it be used, when used at all, freely and energetically.

S. S. JONES, M.D.

809 LEXINGTON AVENUE, November 25th.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from November 23 to November 29, 1884.

LORING, L. Y., Captain and Assistant Surgeon. Assigned to duty as Post Surgeon, San Diego Barracks, San Diego, Cal. S. O. 135, Department of California, November 19, 1884.

WILSON, GEORGE F., First Lieutenant and Assistant Surgeon. Granted one month's leave of absence, from November 20th. (Vancouver Barracks, Washington Territory.) S. O. 180, Department of California, November 18, 1884.

WALES, PHILIP G., First Lieutenant and Assistant Surgeon, now at Fort Cœur d'Alene, Idaho Territory. Ordered for temporary duty at Vancouver Barracks, Washington Territory. S. O. 179, Department of California, November 17, 1884.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending November 29, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
November 22, 1884.....	0	29	54	6	115	55	0	1
November 29, 1884.....	0	42	52	2	90	55	0	0
Deaths.								
November 22, 1884.....	0	9	15	6	14	28	0	1
November 29, 1884.....	0	15	14	2	23	26	0	0

THE VALUE OF HUMAN LIFE.—At the International Congress of Hygiene, at the Hague, Dr. Jules Rochard, of Paris, gave an address on this subject. He called attention to the commercial value of human life and to the loss occasioned by sickness and death; and then proceeded to consider the question, whether hygiene was capable of producing improvement. In doing so, he referred to the disappearance of diseases which once devastated countries. The black death, which destroyed a fourth part of the inhabitants of the world, forty millions in Europe alone, had become almost unknown; and many other diseases, to which our forefathers gave most formidable names, only remained in memory. In the same way, diseases of modern days ought to disappear. Already the occurrence of the plague was only sporadic; ague had still a few victims; but cholera still threatened. Small-pox, measles, and scarlet fever were all diseases against which protection could be afforded. This was best known in the case of small-pox; and he was convinced that the time would come when a father would be punished for having unvaccinated children in his house as much as for having dynamite or gunpowder in his cellar. The value of vaccination was beyond all doubt; and in America and England precautions had long been taken against measles and scarlet fever. By adopting proper methods, disease would be made to disappear. The speaker referred also to the researches of Villemin and Koch, in their bearing on the reduction of the mortality from pulmonary consumption. Severe legislation was not admissible; but care should be taken to prevent the marriage of phthisical subjects; to separate the phthisical from other persons in hospitals, dormitories, etc.; and to prevent the use of tuberculous meat. Endeavors should also be made to cause the disappearance of malaria by the drainage of marshes. In Holland, however, it was scarcely necessary to say this, for the whole country was a marsh, which through the courage and energy of the people had been dried and converted into beautiful valleys. He would not absolutely assert that all the germs of death and disease could be removed by sanitary measures. Hygiene could not entirely displace medicine. For, even when hereditary diseases disappeared, new diseases took their place; anæmia, diseases of the nervous system, alcoholism, morphinism, and many others which were the results of the vices of mankind.

IODIDE OF SILVER.—Dr. Sedan advocates the use of iodide of silver, especially in purulent affections of the eye. The salt is said to exceed in antiseptic power even the bichloride of mercury. The dosage is not given. —*Recueil d'Ophthalmologie*, November 8, 1884.

INHALATION OF THE VAPOR OF GLYCERINE.—Dr. Castle, of this city, writes concerning the abstract of an article in the *Revue Medicale* (MEDICAL RECORD, October 11, 1884), which refers to the benefit to be derived from the inhalation of vapor of glycerine by patients suffering from a fatiguing or painful cough. He thinks there must be some mistake about this, for glycerine is not volatile at ordinary temperatures, and when vaporized in the manner described, without the presence of vapor of water, it is very apt to be decomposed and give off acreolin, which would prove anything but comforting to the respiratory organs of the person subjected to the experiment.

JEWS AS PHYSICIANS.—Dr. C. H. Von Klein says in the *Journal of the American Medical Association*, that sixty-seven per cent. of Jewish physicians maintain professorships in medical colleges; thirty-six per cent. are medical authors. Medicine appears to be the favorite study, and, as a rule, they always maintain a high standing. There have been many Jewish physicians in a professional capacity at the courts of famous kings. The celebrated Maimonides was physician to King Salaheddin, of Egypt; Rabbi Meir to the King of Castile; Zedekiad, physician to Louis the Pious of France, and Montalto to Queen Marie of Medicis.

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Original Articles.

IS THE OPERATION OF TRACHEOTOMY IN DIPHTHERITIC CROUP DANGEROUS?[1]

WHEN SHOULD THE OPERATION BE PERFORMED?

BY JOSEPH E. WINTERS, M.D.,

CLINICAL PROFESSOR OF DISEASES OF CHILDREN, MEDICAL DEPARTMENT UNIVERSITY OF CITY OF NEW YORK.

At the March meeting of the Obstetrical Section of this Academy it was stated[2] that "tracheotomy is an operation attended with great immediate danger to the life of the patient."[3] This statement was so startling to me and so at variance with my impressions from reading, and from my own personal experience, that I believed it to be erroneous. The opinion that tracheotomy is a dangerous surgical operation I believe has no valid foundation, nor will it bear the test of a close examination, and should not be accepted with the confidence with which it seemed to be received in this hall last March.

The speaker, in the closing discussion, in corroboration of his opinion, quoted Mr. Timothy Holmes, of London, as saying that the operation is the most dangerous of any in surgery. On page 303 of Mr. Holmes' work on the "Surgical Treatment on Diseases of Children" will be found the following: "I think that, of all the operations which we are commonly called upon to perform on children, tracheotomy is the most dangerous, both in its immediate performance and in its secondary complications." And further, "I would not recommend tracheotomy while any prospect of recovery existed otherwise." If this suggestion of Mr. Holmes is followed, *delay* in the performance of the operation should be ascribed as the cause of both the secondary complications, and of death, rather than the operation itself. On page 302 he says: "In thirty-one cases the causes of death have been noted; and in *very few* of these cases was the cause of death connected in any way with the operation." . . . The original disease caused death in fourteen cases, "pneumonia and catarrh in twelve, scarlet fever in three, collapse of the lung in one, secondary hemorrhage (fifth day) in one," making the total number thirty-one, in none of which was the cause of death in any way connected with the performance of the operation, for Mr. Holmes states on page 326 that the ulceration which caused the secondary hemorrhage was produced by the tube. On page 316 he says: "Considering the risk of operating below the thyroid isthmus, and the large size and vascularity of that body at an early age, I would urge the propriety of making the opening above the isthmus. . . . After the age of five, or thereabouts, the surgeon can, if he prefer it, open the trachea below the thyroid isthmus. But I do not myself recommend this operation, at any rate before puberty." On page 318 it is stated: "To cut through the isthmus of the thyroid is, in early life at least, a dangerous proceeding."

Speaking of hemorrhage, Mr. Holmes, on page 317, says: "I have three times seen death on the table during tracheotomy; and twice from this cause. In one case, in which I was myself the operator, the child was very young (age not given). On exposing the parts, I dared not divide the centre of the thyroid body, on account of its thickness, and the large size of the vessels visible in it. On the other hand, to open the trachea below I had to *plunge* my knife almost beneath the sternum. . . . In the incision a vein was cut very near to its opening into the left innominate, and the bleeding proved fatal before I could get the tube in."

In the first volume of Trousseau, page 423, he says: "I have often witnessed the difficulties and dangers of a too nimble tracheotomy, even when performed by an able operator."

Marsh[1] says: "It would be nearly as reasonable to cut straight down upon the subclavian artery as to attempt tracheotomy as it is very often performed, and it would be scarcely more dangerous. The amount of hemorrhage during tracheotomy will depend almost entirely on the method of operating."

Mr. Durham[2] says that of one hundred and eight cases of tracheotomy at Guy's Hospital, performed during a period of twelve years, there was not a single case of serious hemorrhage, and the operations were performed by the house surgeons in a very large proportion of the cases, and that, too, very often under circumstances of peculiar emergency and difficulty.

Of eighty-seven cases reported in vol. ix. of *The Medical Times and Gazette*, collected from various London and provincial hospitals, there was but one case of hemorrhage, and in this Marshall Hall's tracheotome was used, and a vessel cut, ending in fatal hemorrhage. Durham says of this, that it is "an instrument which to mention is to condemn."

Regarding the thyroid isthmus, Trousseau[3] says: "If the isthmus of the thyroid body presents itself under your bistoury, never hesitate to divide it in the mesial line; there is usually an arterial jet as large as a thread, which ceases after some seconds, and by this section you have signally facilitated the operation." Of one hundred and nine tracheotomies for croup in children, Trousseau never found it necessary to have recourse to the ligature or torsion for a single vessel; the hemorrhage always ceased as the canula was introduced.

Holmes, on page 323, says the operator in trying to insert the tube into the trachea sometimes "pushes the canula down the cellular tissue in front of the windpipe, causing pressure on the trachea, and obstructing respiration still further." . . . "The third (case) in which I have seen death during the operation, the fatal event seemed to me due mainly to this error."

One of the three fatal cases of Mr. Holmes, then, was due to what Trousseau would have termed a "too nimble tracheotomy;" and in another, death was caused by pushing the canula into the cellular tissue outside of the trachea, and thus adding to the original difficulty. Comments on Mr. Holmes' tracheotomies are unnecessary.

The speaker then quoted Professor S. D. Gross as saying "the same thing" as Mr. Holmes. In Professor Gross' "Treatise on Foreign Bodies in the Air-Passages," on page 231, regarding tracheotomy in children, he says: "I know hardly an operation in all surgery that I would not rather undertake than this. . . . The amputation of a limb, the extirpation of a glandular tumor, lithotomy, and even the perineal section are *trifling matters* in comparison with tracheotomy in a

[1] Read before the Section of Obstetrics and Diseases of Women and Children, October 23d, and by invitation was reread before the Academy at large, December 4th.

[2] Dr. Ripley, MEDICAL RECORD, April 5, 1884, page 369.

[3] "The operation of tracheotomy in young children for croup, in its imminent peril to life, is one of the most dangerous operations in surgery." (Dr. Ripley, MEDICAL RECORD, July, 31, 1880, page 118.)

[1] St. Bartholomew's Hospital Reports, vol. iii., p. 334.

[2] The Practitioner, 1869, vol. ii., p. 212. [3] Trousseau in the Union Médicale.

short, thick-necked, and restive child." On pages 232, 233 he says: "The isthmus of the thyroid gland, even when it descends considerably lower than usual, will seldom embarrass our progress; should it do so, it must be held out of the way, although it has sometimes been divided with impunity."

He adds: "Professor Van Buren, of New York, informs me that he has completely divided this process on several occasions without the slightest loss of blood, mischief, or inconvenience." Even after this Professor Gross says: "Generally, however, it will be well enough to avoid it by holding it out of harm's way; should this, however, be impracticable, any *bleeding* that may be apprehended can be effectually avoided by embracing the part in two ligatures, the knife being *afterwards* carried between them." Here Professor Gross's directions certainly complicate the operation and prolong it unnecessarily.

He next directs that the trachea be held by a tenaculum.

The operation is performed with much more ease and safety when the trachea is grasped between the thumb and index-finger of the left hand than when held by the tenaculum. The trachea should never be entered without our being guided by the touch. If the windpipe is very deeply placed, and is not readily brought into view, it may be taken hold of with the double hook below where it is to be opened, and drawn upward and forward until brought into sight. The hook must, however, be held by an assistant, and the operator should keep his thumb and finger on the trachea.

On page 237 Dr. Gross says: "Great care is to be taken not to permit any blood to enter at the artificial opening, as the *smallest* quantity of this fluid may not only induce violent cough and spasm, but instant suffocation." Further: "The best plan to avoid this occurrence is not to injure any vessels, but to hold them carefully out of harm's way; or, where this is impracticable, *to wait until all hemorrhage has ceased before we penetrate the windpipe.*"

With reference to the first of these statements, it is known that the entrance into the trachea of a small quantity of blood is not dangerous, and many operators purposely introduce a quantity of fluid into it to excite cough in order to expel mucus and membrane. Bretonneau even recommended washing out the tube with a solution of nitrate of silver. Next to the hissing sound with which the air enters the opening in the trachea, one of the most striking things in connection with tracheotomy is the violence with which anything entering the trachea is ejected. To wait until all hemorrhage has ceased before opening the windpipe, would, in many cases, be to wait until the patient is dead. The surest way of arresting hemorrhage is to admit air freely to the lungs, so as to relieve the embarrassed venous circulation, and thus allow the blood to return to the heart. Time spent in trying to stanch the bleeding before opening the windpipe is generally to the injury of the patient.

With reference to this Professor Gross himself says on page 279: "It is worthy of remark that, when the hemorrhage is venous, it generally instantly ceases, even when it is *copious*, the moment the knife penetrates the windpipe." And again on page 266 he says: "I have never experienced the slightest inconvenience from any occurrence of this kind. Several of my operations, in fact, have been nearly bloodless."

Allow me to turn back and repeat a former quotation from Professor Gross, page 231, in order to make a comparison: "I know hardly an operation in all surgery I would not rather undertake than this. . . . The amputation of a limb, the extirpation of a glandular tumor, lithotomy, and even the perineal section, are trifling matters in comparison with tracheotomy." On page 373 he says: "I am satisfied, from the facts before the profession, that bronchotomy, properly performed, is, in general, a perfectly safe procedure, . . . *and rarely followed by fatal results.*"

Dr. Gross in his book does not report a case of tracheotomy for croup. After making a careful analysis of Dr. Gross' work, I am unwilling to accept his first statement regarding the dangerous character of tracheotomy, particularly when it is made to apply to the operation in croup.

Dr. A. Jacobi was quoted as saying that he never went to a tracheotomy operation without a feeling of fear and trembling. In the extensive writings of Dr. Jacobi on the subjects of diphtheria, croup, and tracheotomy, I fail to find any statements which would show that he considers the operation dangerous.

Now let us review the opinions of other authors:

Bretonneau, to whom we are indebted for the revival of tracheotomy in the nineteenth century, does not speak in any of his five memoirs of the operation as being a dangerous one, nor of skill in its performance being a necessity to insure success; his whole stress is upon the size of the canula, the temperature of the air the patient breathes, and the after-treatment and care. Bretonneau was so clear and decided in his convictions, which were always stated definitely, that had he felt the operation to be a dangerous one, he certainly would have mentioned it in one of his several communications.

Trousseau, whose contributions on tracheotomy have never yet been surpassed, said: "Tracheotomy in itself is an operation which is more delicate than difficult; it requires only care and presence of mind." He then says that he has performed the operation "more than two hundred times," and adds, "I have never had immediate accidents to deplore, except in an adult, who died of syncope at the *moment* I made the section of the skin." And again he says, "I have finished these operations, *apparently* so perilous, without fear and without accident."

M. Emangard[1] says: "The performance of this operation is exempt from all danger."

Rilliet and Barthez[2] say: "The operation in itself is not dangerous."

Bouchut, in 1852, said: "This operation is of easy execution—it presents no danger in itself, and if it does not succeed more frequently, it is because the cases in which it is employed are truly beyond the resources of art—the physician ought always to be ready to operate."

West says: "It is admitted on all hands that in itself the operation is not attended by serious hazard; and the uncertainty as to its issue depends not on any defect in the proceeding."

Meigs and Pepper speak in these terms: "*It is the uniform* testimony of those *experienced* in the matter, that the operation is in itself alone but *slightly* dangerous to life."

Vogel tells us that "the operation itself is not attended by any danger to life."

Dr. R. M. Edwards said:[3] "The operation itself is so simple to a man accustomed to handle a scalpel and forceps, that it is surprising so much has been written about it, and so many instruments devised to simplify its performance."

Dr. W. H. Day, of the Samaritan Hospital for Children, says: "Tracheotomy in itself is not a dangerous operation."

Mr. Lawrence[4] says: "We are fully justified in representing the operation of bronchotomy as attended with little pain and no danger." "The operation itself is so simple and so easy that there is very little to be said on the mode of executing it."

Conway Evans[5] says: "That tracheotomy is in itself a very dangerous operation, the tendency of all evidence on the subject tends to disprove." He quotes from Professor Gross' work to show that the operation is not dangerous!

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[1] Les Annales de la Méd. et Phys. Sep., 1827. [2] Dis. of Children, vol. i., 386.
[3] In the Edinburgh Med. Journal, October, 1856, vol. ii., part 1, p. 314.
[4] Med. Chirurg. Trans., vol. vi. 1815.
[5] Edinburgh Med. Journal, January, 1860, vol. v., part 2, p. 623.

Medical College,[1] says: "The operation itself involves very little danger to life."

Wm. M. Mastin,[2] in an article in which he gives an analysis of eight hundred and sixty-three tracheotomies which he collected with much care, says: "I cannot see . . . how any one will venture to say that tracheotomy is *per se* of particular danger."

Mr. Howard Marsh,[3] in an article entitled "Tracheotomy in Children, its Method, its Dangers, and its Difficulties," says: "I am convinced that tracheotomy should be regarded as a delicate operation, which requires coolness and caution in its performance, rather than as one that is necessarily either very difficult or very dangerous."

Robert Wm. Parker, Assistant Surgeon of East London Hospital for Children, says: "By *common* consent the operation itself is not dangerous, and it hardly, if at all, complicates the primary disease which calls for it."

Thomas King Chambers said: "Tracheotomy is an alarming operation to hear of or to look at, but in reality it is not a dangerous one. . . . Do not, therefore, alarm the patient's friends by speaking of it as a 'last hope,' 'a final resource,' or by any similar weak, expression."

Let us see what was the verdict of the older authors on this operation. They always spoke from the force of their convictions, and in definite, unmistakable terms.

According to Galen, Asclepiades first invented and performed tracheotomy in cases of quinsy, about 100 B.C. Here the term "quinsy" relates to croup of the present day, for it is described as an affection which "presents no visible appearance either in the swallow or in the throat, which, while narrowing the glottis, renders the voice acute, and quickly manifests symptoms of strangulation."

Cœlius Aurelanius says: "In this manner he (Asclepiades) saved a great many persons who were in danger of perishing from suffocation."

Fabricus, in the sixteenth century, said: "The operation is absolutely free from danger. . . . There is no part of the least consequence exposed to injury in this operation." Fabricus is the first who speaks of the canula.

Casserius said: "Those are both ignorant and timorous who rashly neglect this safe, easy, and often salutary operation. It is easily performed, and cannot give rise to danger. . . . We have nothing to fear from the slight hemorrhage caused by opening the trachea." Casserius, who introduced the curved canula, is the first who mentions the thyroid gland in speaking of the operation.

In 1586 Sanctorius proposed puncture of the trachea with the trocar, which he had invented for performing abdominal paracentesis.

Bartholini entertained doubts respecting the use of the operation in quinsy, especially in infants.

René Moreau, in his reply, March 1, 1646, declared that the operation was neither difficult nor dangerous, and through his sound reasoning he served to convert Bartholini to the use of the operation.

In 1695 Dekker proposed to perform the operation with a cutting trocar.

Boerhaave,[4] in the first part of the eighteenth century, said: "The windpipe may be divided without any danger to the patient's life."

Detharding, in 1714, wrote, with reference to tracheotomy: "The skin only is divided, and a small portion of membrane. There is no ground for fear, even from the least dexterous operator. No blood-vessel from which one need fear hemorrhage, no nerve of which the division can produce any inconvenience."

Juncker, in treating of this operation, said: "It does not require great dexterity." The first vertical incision through the cartilages of the trachea was made by him.

In 1750 Dr. Lawrence Heister,[1] Professor of Physic and Surgery in the University of Helmstadt, wrote: "This is a safe, easy, and often salutary operation." Heister was the first to use the word tracheotomy.

Louis, in the early part of this century, said: "A little consideration as to the parts to be divided and the mode of doing it suffices to show that the operation could not be attended with the least danger."

Mr. Holmes' obvious misconception regarding the performance of tracheotomy, and the contradictory statements made by Gross, show sources of fallacy on their part; and this, with the vast preponderance of authorities against their opinion, wholly overthrows it.

The operation of tracheotomy not being dangerous in itself, nothing connected with its mere performance should influence the time when it is to be resorted to.

How does diphtheria tend to cause death when left to itself? In a very large proportion of the fatal cases, the disease, in young children, ultimately causes death by mechanically obstructing the passage of air into the lungs. The object of tracheotomy is to supply a provisional air-passage in the place of the obstructed rima-glottidis, so as to allow the disease to run its full course, and to gain time for the administration of remedies; and if it accomplish this, it should be acknowledged, even though the patient should die afterward from the persistence of the original disease, or some of its complications. That it does accomplish this will be seen by the mode of death after the operation. This depends very much upon what time in the course of the disease the operation has been performed; the type of the disease, the condition of the patient, and the care with which the after-treatment has been carried into effect. When the operation has failed to save life, it has been generally either because it was postponed until it was too late, until secondary complications in the bronchi and lungs have arisen, to sudden collapse, to the persistence and extension of the original disease, causing death by asthenia or acute nephritis and uræmia, or because efficient after-management and care were wanting. Suppuration in the anterior mediastinum (this generally may be obviated by not extending the superficial incision too near the top of the sternum), erysipelas and gangrene around the wound, and the slipping of the canula from the tracheal opening have been experienced.

I wish you to mark that none of these causes of death are instances of failure of the operation when properly performed, or of its not removing the main source of danger when the disease is left to itself.

The only lesion that causes death, which is directly due to the operation when properly performed, is ulceration of the trachea from the mechanical irritation of the tube.

Vidand, in 1854, and Goupil, in 1856, exhibited before the Anatomical Society of Paris two specimens of ulceration of the trachea after tracheotomy, produced by irritation of the canula.

In 1859 Barthez called attention to this point, still almost unknown.

Roger, in the same year, in a monograph, published an analysis of twenty-one cases of ulceration of the trachea.

Sanné[2] in his work reports seventeen cases, collected in the service of Barthez. He says: "More or less redness of the trachea and bronchi have been noted in eleven of seventeen cases, out of which seven were accompanied with broncho-pneumonia. In one case there was abscess of the mediastinum, consecutive to a perforation of the posterior wall of the trachea, and one of œdema of the glottis."

In the Trans. Path. Soc., London, vol. xviii., p. 32, is recorded a case of death from pyæmia after tracheotomy, from ulceration caused by the tube. Two cases have happened in Guy's Hospital, in which ulceration extended through the anterior wall of the trachea into the innominate artery, and fatal hemorrhage of course resulted.

[1] Richmond and Louisville Med. Journal, June, 1877, p. 517.
[2] Gaillard's Med. Journal, January, 1880, vol. xxix., p. 15.
[3] St. Bartholomew's Hospital Reports, vol. iii.
[4] Van Swieten's Commentaries upon] Boerhaave's Aphorisms, vol. viii., p. 123. Edinburgh, 1776.

[1] General System of Surgery, fourth edition.
[2] Sanné: Étude sur le Croup, apres la Trachéotomie.

Mr. Marsh reports two instances of ulceration of the trachea out of thirteen operations in his own experience, and makes allusion to three others he has been told of.

There are many cases scattered through the literature on tracheotomy, but these are sufficient for us to recognize its importance, its frequency, and the different ways in which it tends to cause death.

The causes are the shape, the size, and the length of the tracheal tube, so that it presses against the walls of the trachea to the extent of producing mechanical irritation and ulceration.

Roger thinks that a small canula, by allowing of its too free movability and the consequent friction which results from it, can cause ulceration.

The symptoms are expectoration of more or less pure blood, along with the sanguinolent expectoration common to every case of tracheotomy for the first few days, in some cases pain referred to the point where the tube impinges against the wall of the trachea, and dark discoloration of the end of the canula.

The accident can almost always be prevented by having the canula short, curved at nearly a right angle, and of proper size, so as to fit quite accurately the calibre of the trachea, but without making undue pressure, and having it freely movable on its shield, so that it shifts with the varying attitudes of the child. The tube should be carefully watched and the trachea daily examined for indications of irritation, and if detected, the tube must be removed and the opening in the trachea kept open by means of silver or hard-rubber or gutta-percha hooks, which are held in place by a tape going around the neck.

Tracheotomy, then, perfectly accomplishes its primary object—that is, to overcome a positive mechanical obstruction in the larynx, and to prevent that mode of death by which nearly all fatal cases of diphtheritic croup, in which it is not resorted to, terminate, namely, death by asphyxia.

We will now consider

The influence of the operation on the original disease.—Sir James Paget[1] says: "I have never seen the wound become diphtheritic after tracheotomy." Further on he says[2]: "I have collected the particulars of upward of one hundred and twenty cases in which tracheotomy was performed in children suffering with diphtheria, and in none of them was the wound attacked by the disease."

Mr. Spence, in a letter to Sir James Paget, wrote: "I have, on several occasions, seen the wound affected, and have known the child die from that, after the breathing was free and the tube removed." He does not in this communication state, however, whether or not the disease had disappeared from the fauces; in other words, that death was not due to the persistence of the original disease, at its original site.

Mr. Parker, of London, says: "In my own practice it has only occurred twice, and on each occasion it was very slight. In one case, on removing the tube, I found the wound patched over with little islands of false membrane. . . . In another case a similar condition of the wound was found."

Mr. Howard Marsh says: "Diphtheria of the wound is rare."

Trousseau says he has seen leech-bites, slight cuts, blisters, and excoriations and different wounds in various parts of the body became diphtheritic, but he does not speak of its occurrence on the tracheal wound, which, from his usual careful minute way he surely would have done had he ever observed it.

Sanné,[3] who was a pupil of Trousseau, and who bases his observations on six hundred and sixty-two operations on croup by tracheotomy, says in his excellent work: "Diphtheria of the wound is not so frequent as you might at first suppose. It seems that the false membrane appears more readily on the cutaneous ulcerated surface, or that only deprived of its epidermis, than in a wound which involves the profound parts. This is so commonly the case that in diphtheria of the wound the lesion is first to be seen on the superficial parts, or edges of the wound, where the skin has been cut. It then extends to the neighboring parts." . . . "I will not advance, however, that diphtheria never attacks the edges of the wound, . . . but I do insist on this point, that very often the pellicles of the wound have been confounded with plastic exudations." . . . "Diphtheria of the wound by itself is not very grave; of all the complications which belong to the wound it is the most natural, since it is but the propagation to the exterior of the lesion which characterizes anatomically the malady; it has then in a great many cases but a local importance."

I had expected in examining the German authorities to find frequent mention made of diphtheria of the wound, on account of their proneness to call every wound on which there is an exudation diphtheritic. I find, however, that their references to it are very infrequent, that it is always found to be very slight, and does not complicate the original disease or the operation, and that it is readily controlled by simple treatment.

Dr. O. Pinner,[1] in a report of one hundred and thirty-seven cases of diphtheria and tracheotomy says: "In a few cases diphtheria of the wound occurred."

Dr. Max Schüller[2] says in his work: "As a rule diphtheria of the wound may be prevented entirely by the early employment of damp carbolic dressings." . . . "At any rate it seldom becomes necessary to employ energetic remedies, as diphtheria of the tracheal wound does well under carbolic treatment."

Dr. H. Lindner[3] says: "Diphtheria of the wound occurred in but three of one hundred and one cases operated on. Gauze compresses of carbolic acid was the only measure taken to prevent its occurrence."

We now come to

The influence of the operation on the cure of croup.—The admission of air into the lungs through an artificial opening in the windpipe secures for the diseased larynx entire rest, and this leads to a suspension of diseased action there. Even if the patient die after the operation, and we find, *post-mortem*, that the diseased action has not ceased in the larynx, it is generally either because the operation has been too long delayed, and, as a result, death followed too soon for any reparative process to take place, or to the character of the original disease.

Mr. Spence's communication to Sir James Paget shows that the cure of croup may be accomplished by tracheotomy during the persistence of the orginal disease, and which afterward may destroy life.

The following cases from Sanné's interesting work are most instructive, and confirm the statement that tracheotomy tends to the cure of this very fatal complication:

Case IX., page 202.—Aged four years; operated on in second stage of croup. Died third day from exhaustion. Autopsy showed that the larynx contained no false membrane.

Case XI., page 208.—Aged five years; operated on in third period. Died sixteenth day. Larynx swollen and œdematous, but contained no false membrane. Died of Bright's and pulmonary complications.

Case XII., page 213.—Aged eighteen months; operated on in third period. Died fourth day. No false membrane in the larynx. Bronchi contained a quantity of detritus and false membrane. Marked congestion of posterior part of the lungs.

Case XIII., page 214.—Aged five years. Tracheotomy third period. Died eleventh day. No false membrane in larynx; right lung healthy; left lung seat of pneumonia.

Case XXVII., page 252.—Aged twenty-three months;

[1] Second edition of his Clinical Lectures, p. 24.
[2] Op. cit., p. 463.
[3] Étude sur le Croup après la Trachéotomie, par le Dr. Sanné. Paris, 1869.

[1] Deutsche Zeitschrift für Chirurg., B. xiv., p. 304.
[2] Deutsche Chirurg.: Prof. Dr. Billroth und Prof. Dr. Leucke, L. 37. Dr. Max Schüller: Die Tracheotomie, etc., p. 96. Stuttgart, 1880.
[3] Deut. Zeit. für Chir., November 8, 1882, p. 453.

operated on in extremis. Death eleventh day after operation. No false membrane in larynx.

Case XXVIII., page 256.—Aged two years; operated second stage of croup. Died one hundred and fifty-fourth day. Nothing in larynx.

In every recorded case in which death occurred within twenty-four or forty-eight hours after the operation, false membrane was found in the larynx on autopsy.

In "Guy's Hospital Reports," Third Series, volume xxii., the autopsies in cases of croup show the same results as those given above.

Some interesting cases bearing on this are found in *The Medical Times and Gazette*,[1] in an article entitled "Comments on Tracheotomy for Scald of the Glottis." There were three cases which ended in recovery. The ages of the patients were one year, two and a half years, and three years, respectively. "It would appear that when cases do well after tracheotomy for this accident, that the restoration of a healthy condition of the laryngeal mucous membrane is rapid. In one case the canula was kept in place for six days, in another for five, and in a third for three."

The following case from "Guy's Hospital Reports,"[2] with remarks by Mr. Howse, shows still more strongly the value of tracheotomy in the cure of laryngeal disease: A child aged twenty-six months, with chronic laryngitis. Breathing stridulous. Tracheotomy performed by the house surgeon October 8th, died on the night of the 12th. Autopsy showed the larynx and epiglottis to be normal in appearance.

Remarks by Mr. H. G. Howse, one of the editors of the "Reports:" "The normal appearance of the larynx is of great interest, as it tends to show that when the part is put in a state of perfect rest after a tracheotomy operation, all signs of inflammation may subside within five days—the period which elapsed between the operation and death."

The cure of many cases of ulceration of the larynx by tracheotomy, occurring in the course of pulmonary phthisis, and which return after the tracheal opening is allowed to close, but again subside when the functions of the organ are once more suspended, might be quoted if time and space permitted.

The influence of tracheotomy in arresting diseased action in the larynx, leads us quite naturally to contemplate the relation of laryngeal to laryngo-tracheal diphtheria. The diphtheritic process stops at the level of the vocal cords much more commonly than is generally supposed. That this is true of a large percentage of the cases is shown by some valuable autopsies recorded by Krönlein.[3] Of 200 autopsies reported by Krönlein, in 46 there was false membrane in the *larynx and trachea;* and there were 164 with membrane in the *larynx* and on the parts above, and *no membrane in the trachea.*

When the disease involves the trachea it is by *propagation from the larynx, and not by a simultaneous attack on the larynx, trachea, and bronchi.* In many cases this *extension downward may be prevented* by early making a way for sublaryngeal respiration, so that the inflamed larynx may be allowed to rest and be saved from irritation by the passing breath, and thus cause the arrest of diseased action there.

If tracheotomy *per se* is not dangerous, if it meet the complication of obstruction of the glottis, and is promotive of the cure of this complication; if the specific disease is in no way aggravated by it, and very rarely indeed appear on the wound, it certainly brings with it no element of added danger.

Influence of delay.—The next consideration in deciding when to operate would be the result to the patient of delay in the performance of the operation. When we see that medicinal remedies fail to influence the arrest of croup, to relieve, or even to alleviate its symptoms, shall we trust to the occurrence of that rare accident, the expulsion of the membrane, or shall we operate without delay?

As to expectoration of the membrane and cure of the disease without operation, Professor J. Lewis Smith stated at the March or April meeting that about one in eight recovered when medicinal treatment only was used. Statistics of croup (membranous), taken collectively, show that the disease is fatal in about ninety per cent. of the total cases.

After tracheotomy the recoveries are from one-fourth to one-half. Trousseau gives one-third in hospital, and one-half in private practice. Collected statistics from English and Scotch hospitals and private practice show that two-fifths recover after the operation.[1] Sanné[2] gives 89 operations by eleven different operators in various parts of France, with 39 cures: one cure in 2.28 operations. In another table, 39 operations by five operators with 17 cures: one cure in 2.29 operations. These figures at once decide clearly the only course to pursue.

Does delay in the performance of tracheotomy compromise its success? I cannot conceive a case where delay would be more dangerous; there is constant risk of suffocation, which sometimes comes on very suddenly. We gain nothing by delay, while the success of the operation is interfered with to a great extent. When the rima glottidis is obstructed less air enters the lungs with every inspiration, and the lungs are less expanded, and in proportion as the circulation of air through these organs becomes diminished, the circulation of the blood will be embarrassed, and this soon causes this fluid to become vitiated by defective oxygenation. When the operation is long delayed the impeded state of respiration and circulation produce a violent constitutional disturbance; venous congestion has become general, the veins of the head and neck are turgid, the entire body cyanosed, cold, and bathed in clammy perspiration, the pulse at the wrist imperceptible, the face livid and ghastly, the child tossing in agony from one position to another, hoping to find relief, the inspiratory muscles, especially the auxiliaries, making violent, but fruitless efforts to get more air through the contracted glottis. The vessels of the bronchial mucous membrane and the lungs become passively distended, and a little later serum infiltrates into the parenchyma of these organs, and the bronchi become choked up with mucus, thus impeding respiration still further. The weakened and overtaxed heart, with the brain, being supplied only with venous blood—the patient, in fact, poisoned by his own vital fluid—becomes comatose or convulsed, and the sensorial functions blunted and nearly destroyed. Yet it is advised that the patient be allowed to reach this stage, that the immediate precursors of death appear, before making an opening in the windpipe to allow the passage of air to the lungs!

If under these circumstances the operation fails to save life, it is spoken of as being dangerous and perilous, of inducing secondary complications, and similar absurd expressions!

It would be as rational to persist with taxis in a strangulated hernia until gangrene has set in, before relieving the constriction with the knife, as to continue medicinal treatment in a case of obstruction of the glottis until the patient has arrived at the stage described, before making an opening for sublaryngeal respiration. And in the same proportion that delay in strangulated hernia is dangerous, so it is in a case of membranous obstruction of the glottis.[3]

He who has made autopsies in cases of croup where tracheotomy has not been resorted to, and death has oc-

[1] October 22, 1859, page 404.
[2] Guy's Hospital Reports, 1875, vol. xx., pages 507-8.
[3] Krönlein in Langenbeck's Archives for Clinical Surgery, page 253. Berlin, 877.

[1] Medical Times and Gazette, November 25, 1876, page 600.
[2] Sanné: Diphtherie, page 467. Paris, 1877.
[3] Justice to my patient, justice to myself, fidelity to the profession I represent, all unite in demanding that *more*, early, before the development of conditions which will make any interference but a forlorn hope, tracheotomy should be done! (L. S. Pilcher, Proceedings Kings County Society, Brooklyn, May, 1877, p. 82.)

curred from asphyxia, has seen that the lungs and bronchi are in a state of venous congestion.

My own records show this invariably. I have examined the records of a large number of autopsies and have found that, where carefully made and recorded, the appearances were quite uniformly the following:

First, where tracheotomy had not been performed, the lungs and bronchi were congested, and there was *always* an excessive quantity of mucus on the bronchial mucous membrane. In a smaller number of cases, œdema of the lungs and pneumonic changes.

Second, where tracheotomy had been performed in the third stage of croup, and death had followed soon after, the post-mortem appearances were much the same as in the cases not operated on.

Third, where death had taken place from several days to two or three weeks after the operation, the mucous membrane of the bronchi and the pulmonary vessels was quite normal.

Showing how quickly obstruction to respiration may induce changes in the bronchi, Mr. Thomas Bryant[1] relates the case of a child three years old, in whom tracheotomy was performed for foreign body, and it could not be removed. The operation was performed one hour after the accident. The respiration remained unaltered, and nine hours after the operation, and ten after the accident, the child died. On autopsy, the bronchial tubes were found filled with tenacious mucus—in some parts completely obstructing the passage of air to the lungs, which were *airless*. A piece of nutshell was found in the rima between the cords.

The condition of the pulmonary and bronchial vessels, found so constantly after death from croup, results from obstruction in the larynx and impeded respiration, for when diphtheria exists in the throat only, and there is no implication of the larynx, the disease tends to destroy life by exhaustion and blood-poisoning, and rarely do any of the secondary bronchial or pulmonary complications occur.

Where these complications are found on post-mortem examination, after tracheotomy, they are not the result of the operation, for they seldom occur when tracheotomy has been performed on healthy organs, or in cases of syphilitic, and even tubercular laryngeal disease, with chronic pulmonary disease, and the tube is worn for months, and in some instances for many years. The repeated performance of the operation on the same patient within a short period, without accident or complication, and with ultimate recovery, shows the utter harmlessness of tracheotomy, both in its immediate effects and in its remote consequences.

Mr. Greenfield[2] relates that tracheotomy on a child ten months old, with croup, was repeated nine days after the first operation, and seven days after the removal of the tube by the nurse. During the latter part of this operation the child appeared to be dead. Artificial respiration was performed and the child revived. Recovery was perfect. Dr. H. Z. Gill[3] performed two operations of tracheotomy on a boy, aged three years and one month, with croup, at an interval of fifty-one days, with ultimate recovery. No bronchial or pulmonary complications after either operation. Pugin Thornton[4] performed tracheotomy four times in five years on a man sixty-seven years old, with syphilitic laryngitis, without accident or subsequent complication, and the case ended in complete recovery.

The great reason why bronchial and pulmonary complications follow tracheotomy where it is performed for croup is, that where obstruction has continued a long time the lungs are in a state of congestion, and in this condition any slight irritating cause, such as would act harmlessly on healthy lungs, will hasten on into a dangerous inflammation. When it has been decided that a positive mechanical obstruction to the entrance of air into the lungs exists, do not wait until lividity sets in, before making a way for free and easy respiration. Let the operation be done before secondary complications have arisen, or the accession of those symptoms which are in themselves extremely dangerous to life, which often render all treatment unavailing, and make the removal of the mechanical obstruction of less importance.

While estimating the effect of protracted obstruction to respiration with the devitalizing influence on the blood of the rapidly accumulating carbonic acid gas, its depressing action on the organic nervous system and on the heart, we should keep in view that these combined influences are promotive of the spread of that depressing disease, diphtheria.

We must also take into consideration the life-giving and disease-destroying power of oxygen. Oxygen is the most potent of all tonics, and pure, warm air is the most valuable remedial agent that we possess for diphtheria. Let a child with severe diphtheria be kept literally out of doors, in warm, dry, sunny, summer weather, and an almost immediate and uninterrupted improvement in all the symptoms will be observed, both in the general condition and in the local manifestations. In the majority of cases of croup the patient dies from want of oxyger. and exhaustion of the organic nervous system; and the object of the tracheotomy is to render oxygen accessible to the child; and it should be remembered that every draught of fresh air assists in the process of cure. Do not wait, therefore, until the patient's strength is worn out with gasping and fighting for breath before granting him nature's sovereign restorative.

Who can watch a child struggling for breath with all the agony which in consequence ensues without feeling impelled to have recourse without delay to the simple procedure of tracheotomy? Let those who counsel that tracheotomy be the last resort witness the extraordinary relief which follows it, how the breathing becomes tranquil, easy, and regular, the countenance natural, the cold sweat ceases, the pulse is again felt at the wrist, and perhaps the child sits up and takes nourishment, or falls into a quiet, peaceful sleep; and I think they will regret not having granted the child access to air sooner, and lifted in one instant an agony of suspense from the parents!

Guersant ascertained that the resolution of pneumonia is facilitated by the greater freedom with which the respiratory functions are accomplished after tracheotomy. But while the symptoms of suffocation and of pneumonic changes may be relieved by the late performance of tracheotomy, they may often be *prevented* by the early introduction of air into the lungs. It is said that if we advise early operation we may operate on many who would have recovered without resource to this proceeding; and that we may see our patient recover after the operation has been rejected by the parents, but this will happen very rarely indeed, and it is better to err on the safe side, as the operation can never increase the danger, while delay has many times deprived the patient of that chance of life which the operation can offer.

Though there are, undoubtedly, isolated cases of recovery from diphtheritic croup, the proportion of these is so small after we are *positive* that membranous exudation has invaded the larynx, that we ought to have early recourse to the only mode of arresting death in the majority of cases.

It is a far weightier responsibility to decide when to operate than merely to open the windpipe. We must first determine the existence of false membrane in the larynx.

Though recession of the soft parts of the chest-walls with every inspiration is a valuable test of the amount of interference with that act, it does not necessarily indicate the presence of a pseudo-membrane in the larynx, and it is not a reliable guide if the expiration is free and easy, for these symptoms may be due in great part to spasm. The dyspnœa due to spasm alone is intermittent or remittent, never continuous. But if

[1] Guy's Hospital Reports, Third Series, 1860, vol. vi, p. 13.
[2] St. Thomas' Hospital Reports, vol. viii., p. 263.
[3] Illinois State Medical Society Transactions, 1878, p. 167.
[4] British Medical Journal, February 17, 1877, p. 205.

there is suppression of the voice, and expiration is labored, prolonged, and audible, there is no longer doubt about the presence of membrane, for nothing but mechanical obstruction could produce these symptoms. As soon as they appear, and there are no longer remissions between the croupal paroxysms, but the dyspnœa is continuous; if insufflations of alum, or of alum and sulphur, with ipecacuanha cease to afford relief, or emesis can no longer be produced, and if ipecac only purges, and poultices and steam have been fairly tried, it may be said that all remedial measures have failed to control the disease, and the operation should at once be performed.

There is nothing in the operation itself incompatible with recovery, even at the early age of six and nine weeks. In 1830, Dr. Scoutetten, Professor of Surgery, Military Hospital, Strasburg, operated successfully on his own child, six weeks old.

The diagnosis of croup in this case has been questioned, but it is stated in the original report that there was expectoration of membrane for two days after the operation.

In 1880, Dr. Steinmeyer[1] performed a successful tracheotomy on a child nine weeks old. I have during this research found recorded an astonishing number of recoveries from tracheotomy in infants from a few months to two years old, which shows that the tender age of the patient should not be allowed to contra-indicate tracheotomy; and the recollection of these may induce many to perform the operation who now oppose it on the ground of the early age at which we are frequently called upon to have recourse to it in many cases of diphtheritic croup.

In very young children the disease advances much more rapidly, and the liability to bronchial and pneumonic complications is greater, and they come on earlier in the disease than they do in older children, therefore we should operate earlier in the younger. In young children the trachea is deeply imbedded in cellular tissue and fat; it is small and freely movable, and the other structures of the neck are closely connected with it. Thus the operation presents *difficulties* which are not met with in older children.

Prognosis.—Early age, previous ill health, especially chronic catarrh, scrofula, bronchial and chronic pneumonic changes, all make the prognosis more serious. If scarlet fever or measles are prevailing at the time of the operation, and the patient has not had them, he contracts them with increased facility, and the prognosis is rendered very grave by this added danger. Nasal diphtheria makes the prognosis worse and severe epistaxis before or after the operation is of bad prognostic omen. When croup comes on very early in the disease, and makes its appearance very suddenly, and the obstruction is at once extreme, the prognosis is far more serious, for in such a case the membranous exudation early tends to spread into the bronchi, and even to the alveoli. When the lymphatics of the neck are much enlarged, and the neck greatly swollen, the operation has less chance of success. The presence in the urine of albumen and casts make the case more unfavorable. When the breathing is very laborious in character, and the supra-sternal, supra-clavicular, infra-clavicular, and the scrobiculus cordis depressions are not marked, the prognosis is less favorable than when recession at these places is very considerable.

When the bronchi and lungs are free, and the obstruction to inspiration is only in the larynx, the recession of the soft parts is very great. Less marked depression denotes obstruction below the larynx and the existence of secondary complications.

It is an unfavorable sign if the breathing does not become perfectly free and regular after the operation, and indicates either the existence of false membrane below the tracheal opening, or a large quantity of mucus in the tubes, or pneumonic changes. Difficulty in swallowing after the operation is a bad symptom. This arises from fluids passing through the glottis, where they excite convulsive coughing and escape through the canula.

After-management.—Success after tracheotomy is to be obtained more by careful nursing than from the perfection of the operation itself. From careful observation I am convinced that the two main causes of failure of tracheotomy in saving life are the late performance of the operation, and inefficient after-care, and among the last-named want of proper attention to the canula. Obstruction at the inner end of the tube from false membrane or mucus, causes more deaths after tracheotomy, than either pulmonary diseases or the original malady which rendered the operation needful.[1] The physician should not forget that his whole duty is not performed when the operation is completed; that tracheotomy does not tend to *cure* the disease, but that it allows time for the application of the treatment found to be most successful in controlling it.

The sustaining of the patient, the administration of the remedies for the arrest of the disease, attention to measures for subduing the local process and reducing inflammation, the temperature, quality, and amount of moisture in the air that the patient breathes, the care of the canula, and the condition of the trachea and bronchi are not generally carried out with enough thoroughness to give the patient all the advantages which the operation is capable of affording.

I must again revert to the most important of all the questions just now in connection with our subject—the danger of the operation itself. The quotations from so many eminent authorities of vast experience in the performance of tracheotomy prove beyond all peradventure that the opinion that it is a dangerous operation is erroneous—and it is not only erroneous, but dangerous. To the majority of people in this city the proposal of tracheotomy seems equivalent to pronouncing sentence of death; and from the operation being represented as formidable comes the unwillingness of parents to consent to it until the child is about to expire, and of physicians to undertake its performance.

In many cases where tracheotomy is required it is as much a case of emergency as that of a bleeding artery. When danger is imminent, an operation is often needed even without a consultation, and a delay of a few minutes might cost the life of the patient; but owing to the practitioner being afraid to operate, he often leaves his patient struggling for breath and rushes after a *tracheotomist*, and returns, perhaps, to find that his patient has died strangulated.

At the March meeting one of the speakers said that he had been summoned to half a dozen such cases, and then, in alluding to the danger of tracheotomy, he stated that he "was willing to go upon record as saying that there have been more deaths upon the table in tracheotomy than from any other operation which is performed."[2] From this he inferred its danger! It would have been as logical to have said that tracheotomy is dangerous because more patients have died during the delay attendant on the bringing of a tracheotomist to the patient.

An eminent physician in the early part of this century was allowed to perish from this very neglect. Dr. Matthew Baillie in the third volume of the "Transactions of the Society for the Improvement of Medical and Surgical Knowledge," records the fatal illness of Sir John Macnamara Hayes. He was taken ill on July 16, 1809. His disease was croup. On the night of the 18th tracheotomy was proposed. Mr. Home and Mr. Wilson were sent for to perform bronchotomy. Mr. Wilson was out of town, and Mr. Home did not come until four in the morning, but the patient was then in a dying state; he expired at six. Autopsy, 20th: "The cavity of the glottis was found to be almost obliterated by the thick-

[1] Berlin. klinisch. Wochen., No. 46, 1880. Operation for retro-pharyngeal abscess.

[1] Seventy-eight per cent. die in the first four days (Wanscher). Seventy nine and one-half per cent. die in the first four days, and nearly sixty-three per cent during the first two days (Krönlein, in Langenbeck's Archives).

[2] Dr. Ripley, MEDICAL RECORD, April 5, 1884, p. 388.

ening of the inner membrane of the larynx at that part." A prominent practitioner in this city left a case of diphtheritic croup in the care of a young surgeon, who had been on the surgical staff of Bellevue Hospital for eighteen months, with the instruction that he should go for Dr. X. if he thought tracheotomy necessary. It did become so and he obeyed instructions. Dr. X. not being at home, another surgeon was sought and found. The trachea was opened immediately, but the child died soon after from exhaustion, owing to the late performance of the operation.

Contrast this absurd proceeding with the custom in the hospitals in England, where nearly all the tracheotomies are performed by the house-surgeons.

In this connection the action of Professor J. G. Ehrhardt,[1] in the light of a single experience of the kind, is interesting and instructive: "Case of diphtheritic croup, summoned at 2 P.M., December 12th, and found child much worse. Tracheotomy only thing that offered benefit. Time was lost while waiting for my father to assist me, when he arrived the boy was nearly dead. There were two or three respirations after the tube was inserted. I do not believe that the operation hastened death." "December 15th, called to a boy of five years. Time was too precious to send for a surgical assistant; operated at once. Child recovered."

The physician who leaves his patient in a state of rapidly advancing asphyxia and goes in quest, perhaps in vain, of a surgeon merely to make an opening in the windpipe, is as culpable of neglect as he would be if he left a spurting artery and went for a surgeon to arrest the bleeding. Another reason why an exaggeration of the danger of tracheotomy should not prevail is that in country districts it almost entirely prevents recourse to it. A physician but eighty miles from this city, who is in the habit of doing capital operations, has told me that he would not dare to undertake tracheotomy, because there is a *universal* impression that the operation is extremely dangerous to life.

I hope, as a result of the proper appreciation of this life-saving measure, and a thorough understanding of its harmlessness, that when diphtheritic croup is epidemic in the country, tracheotomy will be as frequently performed by the "family physician" as common bleeding used to be.

This misrepresentation of the danger of tracheotomy has caused its abandonment several times in its history. After its proving successful in the hands of Asclepiades, 100 B.C., from its being scorned and being spoken of as a crime by Cælius Aurelanius, it was lost sight of for more than two hundred years, when it was revived by Antyllus about 340 A.D. After this the writings of Rhazes, Avicenna, and others caused its suspension until the time of Paulis Ægenæta in the seventh century, who seems to have repeatedly opened the windpipe. From that date until the attempted reintroduction by Guieto de Cauliaco, in the fourteenth century, we hear nothing of the operation. Brasavola, in the middle of the sixteenth century,[2] asserts in his "Commentaries" that he himself opened the trachea in a case of a patient laboring under quinsy, and on the point of death, and thus saved his life, the surgeon not daring to perform the operation. Dr. Geo. Martyn in 1730 performed a successful tracheotomy on a young lad with croup.[3]

Dr. Michaelis[4] in a letter from New York, dated 1780, advised early operation in these words: "It is unpardonable if it is not resorted to in time."

In 1807 Napoleon offered a prize for the best essay on diphtheria. The men between whom the prize was divided, and all who were gathered at the great medical concourse in Paris when it was awarded in 1808, were, with one exception, opposed to tracheotomy. Caron upheld the operation with great energy and indefatigable perseverance. So strong were his convictions, and so great his ardor, that he offered a prize of a thousand francs to the man who would cure croup with the aid of this operation. But the opinion of the judges and the writers of the prize essays so influenced men that there was no advance made in tracheotomy until Bretonneau. It was given to Bretonneau to restore a supreme resource so unjustly condemned. Four consecutive reverses did not discourage him, and in 1825 he had the happiness of saving the daughter of his best friend by the operation.

In 1814 Thomas Chevalier,[1] of London, made a successful tracheotomy in diphtheritic croup in a boy seven years old. Such, however, was the opposition to and dread of the operation, that[2] "in 1820 a medical gentleman of high standing in this city (Edinburgh) who was anxious to afford relief to two of his children affected by croup could not prevail upon any of the principal surgeons to perform tracheotomy. At his urgent request Dr. Bryce, a gentleman in general practice, operated on one of the children without ultimate success, as both of them died."

Though we need not apprehend the abandonment of the operation to-day, an exaggeration of its dangers might be the means of its being withheld from many who could be saved by it, or of its not being resorted to until it is too late to accomplish any good. Let not the erroneous and dangerous opinion go forth from this Academy that tracheotomy is the most dangerous of all surgical operations! The diffusion of this dictum emanating from such a representative body of medical men, will be the means of destroying far more lives in a comparatively short period, than the operation itself or anything directly connected with its performance has from the time that it was first instituted, more than two thousand years ago.

Conclusions.—Tracheotomy of itself, performed with care, involves little if any danger to life.

Accidents during the operation generally result from want of care.

It prevents asphyxia, and thus gives more time for the administration of remedies, and for the system ultimately to throw off the disease.

It prevents laborious and rapid breathing and lessens exhaustion.

It allows a free supply of air, and thus assists in the cure of the original malady.

It is the supreme resource, and as the patient cannot be made worse by it, do not postpone it until there is but a forlorn hope even from it.

Persistence of the original disease, delay in the performance of the operation, and neglect after, are the causes of its failure.

Operate early, very slowly, deliberately, carefully, and without hurry.

It is never too late to operate: even though the child has stopped breathing, if life is not extinct, open the windpipe and perform artificial respiration—many children have been saved under just such conditions.

If strangulation is the main symptom neither age, constitutional condition, nor complications can furnish a contra-indication to its performance.

It alleviates suffering.

It mitigates all the symptoms.

It obviates secondary complications.

It never adds one element of danger to the original disease.

Statistics taken collectively show that nine-tenths of the cases which render the operation needful will suffocate without it.

Performed early it snatches from certain death fully two-fifths of all the cases.

No patient that dies after the operation would have lived if it had not been performed.

When it fails to save life the relief afforded and the substitution for the most agonizing mode of death—strangula-

[1] American Journal of the Medical Sciences, April, 1873, p. 421.
[2] 1546.
[3] Philosophical Trans., 1730. London, 1809.
[4] Richter's Chirurg. Biblioth., vol. vi., p. 120. Voss: N. Y. Journ. Med., January, 1860, p. 31.

[1] Med. Chirurg. Trans., 1815, vol. vi., p. 150. This operation, though attributed to Mr. Chevalier, was done by Mr. Lightfoot, the house surgeon.
[2] James Spence at the Forty-third meeting of the British Medical Association.

tion—one of the least, by asthenia, are sufficient reasons to justify its performance.

The dictates of science, facts, and common humanity, unite in demanding it.

Severinus must have been inspired when in the seventeenth century he said of it: "It is a divine invention."

Allow me one more quotation, gentlemen. In THE MEDICAL RECORD of June 28, 1884, Professor Letamendi says: "In the days of more knowledge and less nonsense, tracheotomy will be ranked among the minor surgical operations."

Successful Tracheotomies for Croup in Children One Year of Age and Under.

Case.	Age.	Disease.	Operator.	Authority.
1	Wks 6	Croup.	Scoutetten (1830).	Soc. Med. des Hôp. de Paris, 1867.
2	Mos. 3	Croup.	Annandale.[1]	Ed. Med. Jour., vol. vii., part 2, June, 1862, p. 1121.
3	6½	Croup.	Jos. Bell.	Bell: Letter to Brit. Med. Jour., April 8, 1871.
4	7	Croup.	Tait.	Brit. Med. Jour., April 15, 1871, p. 391.
5	7	Croup.	Lindner.	Deutsche Zeitschrift f. Chir., Band xvii., Heft 5 und 6.
6	7	Croup.		
7	7	Croup.	Wegner.	Krönlein: Archiv f. klin. Chir, vol. xxi., 1877.
8	7	Croup.	Krönlein.	Rauchfuss in Gerhardt's Handb. Kind., vol. iii., p. 202.
9	7½	Croup.	Jos. Bell.[2]	Syme: Ed. Med. Jour., vol. vi., part 2, April, 1861, p. 956.
10	8	Croup.	Elias.	Deutsche Med. Wochen., November 9, 1878.
11	10	Croup.	Day.	Greenfield in St. Thomas' Hosp. Rep., vol. viii., p. 263.
12	10	Croup.	Baizeau.	Gaz. des Hôpitaux, 1867, p. 397.
13	10	Croup.	v. Winiwarter.[3]	Jahrbuch f. Kind., 3 u. 4, p. 337, 1876.
14	10	Diphtheria.	Elias.	Deutsche Med. Woch., November 9, 1878.
15	10	Croup.	Bourdilla..	L'Union Méd., 1872, vol. xiii., 3d series, p. 826.
16	11	Croup.	Geo. F. Shrady.[4]	N. Y. Med. Record, vol. xxii., Nov. 4, 1882, p. 512.
17	11	Croup.	Trousseau.	Paris Theses, 1834, vol. x., No. 289, p. 13, Aussandon's Thesis.
18	11	Croup.	Rauchfuss.	Gerhardt's Handb. Kind., vol. iii., p. 202.
19	11	Croup.	J. Cooper Forster.	Brit. Med. Jour., March 25, 1871, p. 309.
20	11	Croup.	Derby.	Stevens: Boston Med. & Surg. Jour., vol. lxxi., October, 1869, p. 167.
21	12	Croup.	Lindner.	Deutsche Zeit. f. Chir., Band xvii., Heft 5 u. 6.
22	12	Croup.	Trendelenburg.	Gerhardt's Hand. Kind., vol. vi., p. 262.
23	12	Croup.	A. T. Woodward.	Mastin: Gaillard's Med. Jour., January 1880, p. 30.
24	12	Croup.	Dujardin.	L'Union Méd., 1872, 3d series, vol. xiv., p. 46.

From One to Two Years of Age.

25	13	Croup.	Wardner.	Lounsbury and Gill: Ill. State Med. Soc. Trans., 1878, p. 164. Mastin: Gaillard Jour., January, 1880, p. 30.
26	13	Croup.	Barthez.	Gaz. Hebdom., 1862, p. 806.
27	13	Croup.	Trousseau.[5]	Jour. des Conn. Med.-Chirurg., September 3d, t. ii., p. 1.
28	13	Croup.	Archambault.	Gaz. des Hôpitaux, 1867, p. 397.
29	14	Croup.	Cabot.[1]	Haywood: Boston Med. and Surg. Jour., vol. lxii., p. 273, 1860.
30	14	Croup.	V. Langenbeck.	Krönlein: Archiv f. klin. Chir., vol. xxi., 1877.
31	14	Croup.	Rapin.	Sanné: Traité de la Diphthérie, p. 481, Paris, 1877.
32	14½	Croup.	Millard et Hémey.	Sanné: op. cit., p. 481. Jour. de Therapeutique, 1874.
33	15	Croup.	Cabot.	Boston Med. and Surg. Jour., vol. lxx., p. 61.
34	15	Croup.	Hélie.	Gaz. des Hôpitaux, 1867, p. 397.
35	15	Croup.	Baizeau.	Gaz. des Hôpitaux, p. 397, 1867.
36	15	Croup.	Isambert.	Clinique Med., vol. i., p. 452.
37	16	Croup.	Lindner.	Deutsche Zeit. f. Chir., Band xvii., Heft 5 u. 6.
38	16	Croup.	Wegner.	Krönlein: Archiv f. klin. Chir., vol. xxi., 1877.
39	17	Croup.	Nathan Jacobson.	N. Y. Med. Record, June 30, 1883, p. 705.
40	17	Croup.	Vigla.	Gaz. des Hôpitaux, 1867, p. 397.
41	18	Diphtheria.	Bartscher.	Deutsche Med. Wochen., 1880, p. 20.
42	18	Croup.	C. Withusen.[2]	Dub. Med. Press, April 5, 1865, p. 320, from Ugeskritt for Larger, March 16, 1865.
43	18	Croup.		
44	18	Croup.		
45	18	Diphtheria.	Josef Pauley.	Berlin. klin. Wochenschrift, February 25, 1878, p. 105-6
46	18	Croup.	George Rachel.	Amer. Jour. Med. Sciences, July, 1877, p. 95.
47	18	Croup.	Collins.	Mastin: Gaillard's Med. Jour., vol. xxix., p. 30, January, 1880.
48	18	Diphtheria.	Voigt.	Jahrbuch f. Kind., vol. viii., p. 121, 1882.
49	18	Croup.	Moutard-Martin.	Gaz. des Hôp., 1867, p. 397.
50	18	Croup.	Potain.	Gaz. des Hôp., 1867, p. 397
51	18	Croup.	Archambault.	Gaz. des Hôp., 1867, p. 397.
52	19	Croup.	Roger.	Gaz. des Hôp., 1867, p. 397.
53	19	Croup.	Pancoast.	Meigs: Amer. Jour. Med. Sciences, April, 1849.
54	19	Croup.	Bose.	Krönlein: Op. cit.
55	19	Croup.	Weber.	Zeitschrift f. Ration. Med. Neue Folge 1, Band iii., Heft 1, p. 8, 1852.
56	19	Croup.	Wegner.	Krönlein: Op. cit.
57	19	Croup.	Trendelenburg.	Vaneschi: Berliner klin. Woch., April, 1872, p. 163.
58	19		Jennings.	Archives of Pediatries, vol. i., No. 9, Sept. 15, 1884, p. 546.
59	20	Croup.	Busch.	Vaneschi: Berliner klin. Woch., April, 1872, p. 163.
60	20	Croup.	Bose.	Vaneschi: Berliner klin. Woch., April, 1872, p. 163.
61	20	Croup.	Fitzau.	Berliner klin. Wochenschrift, April 25, 1879, p. 223.
62	21	Croup.	Krönlein.	Krönlein: Op. cit.
63	21	Croup.	T. Sendler.	Vierteljahrschrift f. Prak. Heil., vol iv., p. 71.
64	22	Croup.	Dower.	Brandt: N. Y. Med. Record, January 13, 1883, p. 54.
65	22	Croup.		
66	22	Croup.	Isambert.	Sanné: Diph., p. 481.
67	22	Croup.	Cushing.	Pacific Med. and Surg. Jour., vol. vii., p. 14.
68	22	Croup.	Laborde.	Gaz. Hebdom., 1862, p. 807.
69	22	Croup.	Maslieurat-Lagémard.	Gaz. Méd. de Paris, 1841, p. 380; 1842, p. 170.
70	22	Croup.	Ferraux.	Gaz. Hebdom., 1862, p. 807
71	22	Croup.	Johnson.	Ill. State Med. Soc. Trans., 1879, p. 120; reported by Gill.
72	22	Croup.	Wegner.	Krönlein: Op. cit.
73	22	Croup.	Laborde.	Sanné: Diph., p. 481.
74	23	Croup.	Trousseau.	Sanné: Diph., p. 481.
75	23	Croup.	Bose.	Krönlein: Op. cit.
76	23	Croup.	Burland.	Gaz. Hebd., 1862, p. 808.

Cases Exact Ages not Given.

77	Yrs. -2	Croup.	Krackowizer.	Jacobi: Am. Jour. Ob., May, 1868.
78				
79	1-2	Croup.	Körte (three cases).	Arch. für klin. Chir., Band xxv., p. 820.
80				

[1] Child lived seven weeks after the operation. On autopsy lungs were found to be perfectly healthy.

[2] Communication to Med. Chirurg. Society, Edinburgh. Professor Syme thought that the operation would not do any good in this case, but yielded to Bell, the house-surgeon, who did the tracheotomy, which was followed by instant relief to the child.

[3] Respiration stopped and artificial respiration was performed for ten minutes, and had to be resorted to three times within the first hour.

[4] This is the youngest successful case operated upon in this country. This operation was performed between the tenth and eleventh month. Child is still living.

[5] Operation same year as reported.

[1] Child had double pneumonia and recovered.

[2] One case died on eighty-first day of exhaustion from diarrhœa.

COCAINE IN INTRA-NASAL SURGERY.

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On the receipt of the intelligence of Koller's experiments[1] with cocaine, through Dr. Noyes' communication to THE MEDICAL RECORD, the first thought was naturally one suggestive of startling possibilities corresponding in direction with the reader's line of inquiry. In response to this impulse I have conducted a series of experiments with the new anæsthetic in operations upon the nares, and in view of the remarkable and positive character of the results obtained feel encouraged to relate my experience, with certain additional corroborative testimony.

My first experiments, conducted several weeks since with a two per cent. solution of the salt, were not extended on account of the unfavorable impression received. Though sceptical regarding the action of this solution for my purposes, I was nevertheless inclined to expect better results from a stronger preparation. A four per cent. solution of the crystalline hydrochlorate of cocaine was afterward obtained from a different source. My method of applying the salt consisted in placing pledgets of absorbent cotton in contact with the structures requiring removal, and projecting upon them, by means of a glass tube, from five to ten drops of the cocaine fluid. The cotton once moistened can be used several times at a single sitting; indeed cotton saturated with the fluid and afterward dried will remain cocainized for many hours. I employ an exceedingly fine home-made spray to produce more extensive effects.

The cases reported have been selected on account of the exaggerated sensibility of the structures involved, and as such offer excellent evidence of the powerful analgesic action of cocaine.

Mr. ——, banker, consulted me on account of an annoying nasal catarrh. Examination revealed, among other things, a deviated septum pressing against a congestive hypertrophy of the left antero-inferior turbinated tissues. The deviated cartilage extended as a narrow horizontal ledge to the osseous edge of the septum, and obstructed nasal respiration through the left nostril. While employing a probe to point out the site of the affection, it happened to lightly touch the septum. The patient started as if severely injured, and invariably exhibited signs of intense discomfort. When the manipulation was repeated, intense sensitiveness was exhibited, and my prospects of assistance from the patient in a deliberate operation could hardly have been less favorable. A pledget of absorbent cotton was inserted in the nostril, against the abnormal structures, and a few drops of the cocaine fluid placed upon it by means of a camel's-hair brush. At the expiration of twenty minutes the cotton was removed. The first effect observed was the retreat of the lower turbinated tissue from contact with the septum, thus affording more room for operative manipulation. This peculiar action of the cocaine has already been described by Dr. Bosworth. I tentatively nipped off a piece of the septum with my fenestrated cartilage forceps; the procedure, according to the patient's statement, was perfectly painless. Emboldened by this I commenced work in earnest, the slight amount of bleeding enabling me to continue operating uninterruptedly for five minutes. During this interval the patient declared there was an entire absence of sensation. The parts were then cleansed of tissue débris. In five minutes sensation had returned. I reapplied the cocainized cotton, and after leaving it in five minutes, proceeded with the operation. In this interval I removed the whole length of the remaining deviated cartilage. The patient could with difficulty find words to express his profound sense of satisfaction.

Amanda D——, aged sixteen, referred to me by Dr. S. Hemingway. Congenital occlusion of the nares from malformation of nasal and turbinated bones. Bridge of the nose almost entirely wanting. Interocular space very broad, falling of the lower jaws, with associated signs of habitual mouth-breathing. Both nostrils impacted with flesh-like masses, having almost the firmness and elasticity of rubber. The structures were jammed so tightly against the wall of the septum as to give at first sight the impression of its fusion with the cartilage. The turbinated tissues present none of the usual signs of hypertrophied membrane, having the appearance of slightly congested turbinated tissues, and having only a trifling tendency to retract when touched with cocaine. The tissues still possessed a sensibility evidently equalling that of the normal erectile structures. The posterior nares were obstructed. A case of congenital stenosis successfully treated by me several years since presented many features in common with this one.[1]

I had operated upon Amanda D—— on a previous occasion, employing my transfixion needle and écraseur. The child did not possess a particle of fortitude, causing me a great deal of trouble by her persistent crying, and in spite of every precaution for her comfort she proved herself to be one of the most intractable patients I ever had to contend with. This state of hyperæsthesia was probably due to the prolonged contact of these delicate tissues with the septum narium. The case seemed an excellent one for the employment of cocaine. I therefore placed a pledget of absorbent cotton in the left nares, and moistened it with a few drops of the solution, carried into the nostril upon a camel's-hair brush. After the expiration of fifteen minutes I removed the cotton, and deliberately transfixed the pale tissues, the passage of the needle, as stated by the patient, causing absolutely no pain. The loop was likewise painlessly introduced, and the operation satisfactorily completed.

After an interval of five days I continued operating, replenishing my cocaine bottle from a neighboring druggist. The solution, though applied as in the first instance, did not have the desired effect. I then procured a fresh solution from still another druggist. This fluid likewise failed. Later in the day I procured some of the original preparation, and found it as effective as in the first instance. Small portions of the turbinated bodies were successfully removed by means of the fenestrated cartilage forceps, an expeditious but more painful and bloody method than excision with the wire, and therefore never employed by me for this purpose. The controlling influence of the cocaine over the blood supply removed this objectionable feature, and furnished a clear field for operation. As the incisions gradually included the deeper-lying tissues they became sensitive, requiring fresh applications of the cocainized cotton.

Mr. P——, merchant, thirty-two years of age, was seen by me in consultation with Dr. Bellows, of Brooklyn. The patient had been unable to breathe through the nose for fourteen months. The nostrils closed gradually, the right being the first to become involved.

Dr. Bellows informed me that he had already been in the hands of a physician, who employed the galvano-cautery for several weeks. A surgical procedure of a more formidable character was next employed, the patient emerging from etherization only to be confined to the house for three weeks on account of the severity of the operation, and an otitis media acuta set up by the traumatism. After recovering from these unfortunate sequelæ his condition was worse than before the operation. An examination showed the right nostril to be entirely occluded by a combined deviation of the septum and turbinated hypertrophy. A very narrow chink in the left nostril permitted the occasional entrance of a feeble current of air, enabling the patient to partially remove pent-up nasal secretions. It possessed, however, very little respiratory value.

I have been gradually clearing the nostrils for several

[1] Wiener Medizinische Wochenschrift, No. 44, 1884.

[1] Archives of Laryngology, vol. iii., 1882.

weeks, removing small portions of the tissues in such way as not to interfere with the patient's business. Although the careful excision of small portions of bone and cartilage greatly diminished his suffering, there were, nevertheless, moments when he complained severely of the pain inflicted by the *rongeur* and cutting forceps. I employed cocaine by placing small bits of absorbent cotton in contact with the already wounded and tender surfaces, and dropping the solution upon it by means of a pipette. In thirty minutes the pledgets were removed and a tentative test made. Although the forceps inflicted pain, superficial sensation was reduced to a degree permitting the stripping off of membranes partly divided in a previous operation. Another application of cocaine was made, the cotton being again removed after an interval of fifteen minutes. I then commenced to divide the tissues, and was told to continue the operation, as no pain was inflicted. I continued operating for three minutes, when the patient interrupted me while cutting away the deeper structures over the vomer. In this interval bone and cartilage were alike divided without causing the slightest pain. This method of alternately benumbing and cutting was continued for more than two hours and a half, the patient being in the best of spirits during the entire interval. He left the office breathing through a free opening into the posterior nares, and thoroughly convinced of the pain-relieving properties of cocaine.

The following history, reported through the courtesy of Dr. William Vanderpoel, offers additional evidence in a case in which my écraseur was recommended: Mrs. Annie M——, aged twenty-nine years and six months, pregnant, presented herself at my office, November 3d, suffering from a growth in the left nostril which protruded three-fourths of an inch, was about three-fourths of an inch in diameter, of a dark red color, firm upon pressure, and insensible to ordinary manipulation. Two months previous she had come to me, presenting a small growth in the left nostril, which had all the characteristics of an ordinary gelatinous polypus. Under ordinary circumstances I should have removed it at once; but considering the fact that she was then four months pregnant, and had previously miscarried three times, in each instance with profuse flooding, I feared the shock of an operation and ordered a spray of carbolic solution ($\frac{1}{10}$), under which treatment the growth seemed to disappear, but a month later returned.

Still fearing an operation, on November 9th I injected the tumor with a few drops of glacial acetic acid, and also gave the patient a powder, composed of tannin, to be snuffed up the nostril as best she could. On November 15th, there was little improvement, so I decided upon an operation. To lessen the pain and shock of the operation, I employed the muriate of cocaine, two per cent. solution, applied with a camel's-hair brush, to inside of the nostril, as well as the tumor would permit the insertion of the brush.

I made three applications at intervals of ten minutes, using in all 3 ss. of the solution, or about one grain of cocaine muriate. The first application was rather painful from the contact of the brush, but the subsequent caused no uneasiness. The Jarvis' snare was then applied without any discomfort, and passed well up to the root of the tumor, which seemed to have origin from the middle turbinated bone. No pain was experienced during the operation, and after an hour and a half the tumor came away, the patient not losing more than a few drops of blood during the entire operation, and no hemorrhage followed it.

In addition to the foregoing cases I have employed cocaine to remove polypi and hypertrophied turbinated tissues, and have found it useful to facilitate the practice of posterior rhinoscopy and to alleviate pain in the larynx and pharynx. I do not consider its employment urgent in the removal of polypi and turbinated hypertrophies, since these growths, especially the former, can be in most instances removed with little or no pain by means of my nasal écraseur. The time required to make the operation painless with the snare is necessary also to prevent the occurrence of annoying hemorrhage. Although cocaine at times restrains bleeding, its action in this respect is not necessarily permanent. I have observed tissues pale and bloodless when divided under the influence of cocaine, bleed profusely as soon as the effect wore off. The employment of cocaine in the nostril has been referred to in this country by Bosworth, Bettman, Ingals, Knapp, Gruening, and Claiborne.

It is curious to note that while Professor Wöhler and Dr. Niemann mention its effects upon the tongue, they claimed it possessed no action upon the eye.[1] Von Anrep (*Archives für Physiologie*, p. 56, 1880) experimented upon himself by pencilling the tongue with a weak solution of cocaine, and observed a loss of sensation. The blood-vessels were first constricted, then dilated, and eventually resumed their normal condition. It was probably this discovery that induced Fauvel and other European laryngologists to employ cocaine in examinations of the throat. Although I have only employed a four per cent. preparation of the salt, the experiments of Jelenek[2] indicate an advantage to be obtained by the employment of stronger solutions (twenty and thirty per cent. alcoholic) of the salt. The difference will probably show itself in a deeper and more rapid effect. My remarks upon cocaine analgesia would be incomplete without reference to another agent of this kind. I allude to rhigolene. Although no record of its use in intra-nasal surgery has come under my notice, rhigolene has yielded excellent results in my hands. For the present I must content myself with a brief account of the method, since a detailed description would be foreign to the subject of my paper.

This petroleum naphtha, proposed by Dr. H. J. Bigelow, of Boston, as a local anæsthetic, boils at 70° F., and, in the form of a spray, is capable of reducing the temperature 15° below zero. Rhigolene, when applied with a suitable atomizing apparatus, will effectually freeze the tissues in less than a minute.

I make use of a special contrivance for this purpose. Its action is more prompt and deeper, but of shorter duration than that of cocaine. Cartilage and mucous membrane can be deeply and freely divided without pain or hemorrhage. The rapid disappearance of the artificial congelation makes it necessary for the operator to act with promptness and energy. In cases requiring extensive operative interference, frequently repeated applications of the rhigolene spray are necessary. This, however, does not apply to the practice of écrasement. Tissues properly snared with the wire loop of my nasal écraseur can be continuously frozen and divided. I have utilized partial cocaine anæsthesia to facilitate transfixion and snaring of the turbinated tissues, rapidly completing the operation with the rhigolene spray. It is hardly necessary to add that daylight must be employed for illumination, on account of the inflammability of the naphtha fumes.

Rhigolene acts more rapidly than ether, and for this and other reasons is to be preferred.[3]

Conclusions.—1. Cocaine is useful in intra-nasal surgery, as a local anæsthetic, for the removal of deep as well as superficial tissue abnormalities.

2. Repeated applications are required for the removal of the deeper structures, the time requisite for anæsthesia always being shorter after the first effect has been obtained.

3. By promoting quiet and preventing secretion, hemorrhage, and sneezing, it facilitates the employment of cutting instruments within the nasal cavity.

4. The action of cocaine for profound anæsthesia depends upon the quality and quantity of the salt.

[1] American Journal of Pharmacy, 1860, vol. xxxii., p. 450.
[2] Wiener Medizinische Wochenschrift, No. 45, 1884.
[3] Dictionnaire de Médecine, etc., Littré and Robin.

5. In rhigolene we possess a most valuable local anæsthetic for intra-nasal operations, the effects produced being more rapid and complete but of shorter duration than those of cocaine.

6. Rhigolene is advantageously employed in conjunction with cocaine.

25 East Thirty-first Street.

FURTHER OBSERVATIONS ON THE USE OF COCAINE.

By H. KNAPP, M.D.,

NEW YORK.

Since my communication on cocaine and its application, Medical Record, October 25th of this year, I have used the new anæsthetic in a considerable number of cases, of which the following may be of interest even after the galaxy of cocaine papers that have appeared in the American and foreign press since October 18th.

Case I.—*Enucleation of an eyeball under anæsthesia from injecting cocaine into the post-ocular cellular tissue.*—To-day, at my clinic at the University Medical College, I presented a patient, aged twenty-five years, in whose left eye I had diagnosticated a choroidal sarcoma. I stated before the class that it would be quite an interesting experiment to inject cocaine into the orbit, behind the globe, and afterward test the sensibility of the anterior parts of the eye, supplied by the ciliary nerves. The hour, however, drawing to a close, the practical indications of the case were the only ones we had time to attend to. I instilled two drops of a four per cent. solution of Merck's hydrochlorate of cocaine into the conjunctival sac. Five minutes later another five drops were instilled, and about six minims of the same solution injected behind the globe. This was easily done and not felt at all by the patient. The eyeball had been forcibly drawn toward the nose with a pair of fixing forceps, the point of the hypodermic syringe thrust into the orbital tissue as far as the posterior pole of the globe. Five minutes later the eye was enucleated in the usual way. The patient indicated slight pain at the division of the tendons of the recti muscles. The division of the optic nerve and the dissection of the posterior segment of the globe caused almost no pain. When the eyeball was removed, I thrust the end of the forceps an inch deep into the wound of the orbital cellular tissue. The patient did not move, and said she felt nothing. The bleeding was very scant. The eyeball was opened at once, and a typical melanotic sarcoma of the choroid, the size of a cherry pit, covered by detached retina, was exhibited to the class. Ten minutes later, when the hemorrhage had completely ceased, I united the conjunctival wound with a continuous suture. By this time the sensibility had returned, and the patient screamed at every stitch, saying that this hurt her very much, whereas during the operation she had felt almost no pain.

This observation has convinced me that even the removal of the eyeball does not lie outside the field of application of the new local anæsthetic.

Case II.—*Ptosis operation after subcutaneous injection of cocaine; anæsthetic effect not very satisfactory.*—A boy aged about ten years, with double congenital ptosis, was operated on at the clinic of the University, November 25th. I injected a few drops of a four per cent. solution of cocaine under the skin of the right upper eyelid, introducing the point of the syringe 3 mm. above the edge of the lid, near the outer commissure, and advancing it horizontally nearly to the inner commissure. In withdrawing the needle, I injected the liquid. The lid swelled slightly, was suffused with blood, and in ten minutes only partially insensible. I held it compressed between a clamp, removed an elliptical piece of skin and muscle, and stitched the lower lip of the wound to the upper, passing the sutures high up through the skin. The tissue which I removed was infiltrated with blood. The patient had pain during the whole operation, not great in the centre, but quite keen at the periphery of the wound. He was restless and uneasy. I etherized him, which took about one minute, and performed the same operation on the other eye under perfect anæsthesia. The four black silk-sutures which loosely closed each wound were removed to-day, a week later, before the class. There was no trace of suppuration; primary union had taken place in both lids, though the wounds had been protected by nothing more than a clean handkerchief, and the boy had gone home to Harlem immediately after the operation. The result in both eyes is perfect.

Case III.—*Perforation of drumhead; cocaine anæsthetizes the inner wall of the drum-cavity, but not the drumhead.*—Mr. ——, aged twenty-one, a student of medicine, presented himself on October 23d at my office, with a middle-sized, clean-cut perforation in each drumhead. The drumheads, as well as the inner walls of the drum-cavity were quite sensitive to the touch of a probe. Fifteen minutes after the instillation of cocaine, the drumheads had lost nothing of their sensibility, but the inner walls of the drum-cavity were completely anæsthetic. The patient felt a bitter taste in his throat.

Case IV.—*Cocaine in cataract operations pre-eminently useful.*—Division of primary and secondary cataract is entirely without pain—a great advantage, for it removes also the reflex contraction of the globe, which favors too great a capsular opening in soft cataract, and prolapse of vitreous or of shreds of capsule in secondary cataract. The perfect rest of the eyeball is highly favorable for an exact technique.

In extraction of senile cataract under cocaine, there is only one step connected with pain, viz., the excision of the iris. This pain is commonly not great, and easily borne. The perfect insensibility of the conjunctiva and cornea insures the steadiness of the eyeball, and the correct location of puncture, counter-puncture, and track of the section. The absence of pressure makes accidents, such as falling of iris before the knife, and prolapse of vitreous, less likely to occur. Without going into details, I may say that it assists the operator in every step, but particularly in the so-called toilet of the wound, *i.e.*, its cleansing and final adjustment.

The property of cocaine to contract the blood-vessels, which is of great advantage in operating, has been suspected of having bad after-effects. Dr. G. J. Ball, in the *New York Medical Journal*, November 22, 1884, page 587, makes the following remark: "It became a question whether the new anæsthetic might not impair nutrition in certain operations in which the slightest impairment might affect the result injuriously. In two cases of cataract extraction in which cocaine was employed, the operations had been followed by sloughing of the flap. It might be well to consider whether this was more than a mere coincidence." I think it was not. Since the introduction of cocaine, fifteen successive extractions have been performed under the influence of cocaine at the New York Ophthalmic and Aural Institute. Only one operation was followed by some reaction—it was a complicated operation. The recovery was protracted, but good. The other cases were free from any disturbance both during the operation and the course of healing, and the results were good in all.

I feel sure that in this, the most important operation in ophthalmic surgery, the rate of success will be increased by the introduction of the new anæsthetic, through Dr. C. Koller.

December 2, 1884.

The Shortest Clinical Report on Record.—A correspondent from Warren, O., would like to hear from the profession on the following case: "Man—after swallowing glass of whiskey, chewed and swallowed part of the glass." Correspondent would like to know how it should have been treated.

Clinical Department.

MURIATE OF COCAINE IN DENTISTRY.

G. W. Weld, M.D., D.D.S., of New York, believes that the best method of application of muriate of cocaine in the operation of removing tartar from the teeth, in Rigg's disease, is as follows: Wash the gums with a little dilute alcohol, then apply, by means of a camel's-hair brush, a small quantity of a ten per cent. solution of the cocaine. Renew this once or twice, when in the course of five minutes it will be found that there is a marked numbness and diminution in the sensibility of the gums corresponding to the sides of the teeth on which the application was made. The following formula is recommended:

Cocainæ chloridi (Merck)..... gr. vj.
Spiritus menthæ piperitæ ..... ʒj.

An exposed nerve pulp was treated with the above solution, and partially extirpated, without causing any pain to the patient. In the preparation of an extremely sensitive tooth for filling, a *glycerite, ninety per cent.* in strength (made by dissolving Merck's crystals in glycerine) was allowed to remain in the cavity for a period of thirty minutes. On renewing the operation the patient stated that the pain was materially deadened. The same experiment was tried with the borate of cocaine (Foucar's crystals), and similar results apparently obtained, but the paste was permitted to remain in the cavity of the tooth for twenty-four hours.

Dr. C. H. Shears writes: "I have used cocaine twice in the extraction of teeth, and in each case the operation was for a single tooth. The preparation used was a two per cent. solution. In the first case the tooth was exquisitely tender and the gum inflamed, and so closely adherent to the tooth that it was necessary to incise it. After carefully drying the gum, a small camel's hair-brush was dipped into the solution, and the gum on either side of the tooth brushed across a few times. This was repeated twice at intervals of about three minutes, making three applications in all. A few minutes later the gum lancet was used, *with almost no pain at all.* The tooth was then extracted with a little less pain than it could have been without the anæsthetic. The second case was similar to the first, and the solution was applied in the same manner, with two additional applications. After cleansing the incision from blood a few drops of the solution were instilled into it, and repeated once after about three minutes. No pain attended the incision, and the tooth was extracted with considerably less pain than in the first case."

W. P. Horton, Jr., of Cleveland, O., sends us word that he inserted a few drops of the four per cent. solution into the cavity of a sensitive tooth, and that a few minutes afterward he used the dental engine without pain.

Dr. J. R. Uhler, of Baltimore, Md., says that on November 1st, he published some experiences with muriate of cocaine in general surgery. In all cases it produced more or less superficial anæsthesia, but acted better on thin mucous membranes than on the unbroken skin. Upon the rectum, when freely used, beside benumbing the parts, it produced in two cases a rigid tonic contraction of the sphincter ani, which had previously been relaxed, and contraction of the longitudinal fibres of the gut, pulling up the mucous membrane, which before had protruded. So firm was the contraction that the sphincter stood out like a ring, and the finger could with difficulty be made to enter it. For vaccination and small operations upon the skin, the following plan was tried in two cases and found satisfactory. First, a few drops of a strong solution of the drug were painted on the skin where it was intended to be cut, and after the lapse of a few moments the knife, dipped in some of the solution, was passed gently over the part, so as to denude only a few of the outer cells of the skin, but not penetrating deeply enough to cause hemorrhage or pain. Over this minute abrasion or cut, which was made to allow the drug to get nearer to the nerves, and be absorbed, some more of the solution was painted, and after a short interval the operation was proceeded with, the patients making no complaints. Where mucous membranes are hard and very thick it will act slowly or imperfectly, unless used by hypodermic injection, and anæsthesia is most plainly perceived where nerves are most thickly distributed. In a case of labor reported in the Maryland *Medical Journal*, I purposely avoided applying cocaine to the mouth of the uterus, as I feared that tetanic rigidity of the organ might be produced.

MURIATE OF COCAINE IN GENERAL SURGERY.

Dr. J. W. Stickler, of Orange, N. J., wishing to know the effect of cocaine hydrochlorate upon the skin and underlying tissues, had the following experiment tried upon himself by Dr. T. Y. Simpson: Dr. S—— injected with an ordinary hypodermic syringe, four and one-half minims of a four per cent. solution of the alkaloid under the skin of the fore-arm. After the lapse of five minutes, the point of a knife was applied to different parts of the skin, immediately over, and adjacent to, the point of puncture, with the following result: partial anæsthesia of the skin *along the line of the injection*, most marked at the point where the fluid was deposited in the tissues, that is, at the precise point where the cocaine was forced from the point of the hypodermic needle. On either side of this line, the partial anæsthesia extended about one-eighth inch. As the anæsthesia did not become more pronounced after waiting another five minutes, a second injection of five minims was made. The needle was inserted at a point just beside, and parallel with, the first, but forced deeper into the tissues (one inch). At the end of five minutes, the same superficial test was applied as in the first instance, the face being turned aside so as not to see the application of the knife. Sensation seemed about normal, except in a band of integument, nearly one inch long, and half an inch wide, the maximum superficial anæsthesia existing along the line of the opening made in the tissues by the hypodermic needle. The hyperæsthetic line bounding the anæsthetic area (referred to by Dr. Hepburn in Medical Record, November 15, 1884) I could not define in my own case, and there did not seem to be *increased* sensitiveness at *any* point within the limits of that portion of the skin slightly congested by the action of the drug. After thirteen minutes had elapsed from the time of puncture, the doctor transfixed with a surgeon's needle the anæsthetic skin, without producing the *slightest pain.* The needle being withdrawn, an incision was slowly made with a scalpel through the entire thickness of the skin and cellular tissue, producing *so little sensation of any kind* that, had my attention been otherwise engaged, I doubt if I would have known that the doctor was cutting me. This cut was made along the line of the injection, and about corresponded in extent with the length of the hypodermic needle. The wound was left open about four minutes, when a needle was slowly introduced, at a point midway between the two extremes of the cut, into the deeper tissues. Absolutely *no sensation* was experienced till the point of the needle entered the sheath of one of the extensor muscles. That the muscle was penetrated was evident from the motion given the needle when the muscle was exercised. The pain occasioned by contact of the needle with the muscular tissue was very slight. About five minutes later, sutures were introduced without pain, but produced a sense of pressure such as Dr. Wright said he felt when a needle was thrust into the skin of his forehead (Medi-

CAL RECORD, November 22, 1884). The anæsthesia remained well pronounced half an hour. Twenty minutes after the second injection, there were slight muscular tremors; other than these, there were no evidences of systemic disturbance. It is interesting to observe that when the hypodermic needle is made to traverse a direct course through the skin and cellular tissue, the hydrochlorate of cocaine does not diffuse itself equally in every direction, but follows quite definitely the channel made for it by the needle, producing anæsthesia along this line, but to a very limited extent on either side of it. In opening an abscess, or in making any straight incision, this circumstance would find a practical application. A much larger area of skin could be rendered anæsthetic by one injection, if the cellular tissue were made more permeable by moving the point of the injecting needle from side to side after its introduction.

MURIATE OF COCAINE IN OPERATIVE GYNECOLOGY—VESICO-VAGINAL FISTULA.

DR. W. H. DOUGHTY, JR., of Augusta, Ga., writes: "The peculiar interest which attaches to all reports upon the use of the hydrochlorate of cocaine leads me to report the following observations, made November 18, 1884, upon its effects during an operation for vesico-vaginal fistula.

"The fistula was a small one, barely admitting a silver probe of ordinary size. The patient having been placed in the 'knee and breast' posture, after thoroughly cleansing the vaginal surface and roughly testing its sensitiveness, two applications (two drops each) of a two per cent. solution of the hydrochlorate of cocaine were made, three minutes apart. Two minutes later the sensitiveness was decidedly lessened, but not enough for my purpose. The solution was now freely applied with a brush, and five minutes later the application was repeated. After three minutes more the anæsthesia seemed to be complete.

"The paring was made during sixteen minutes without the slightest evidence of pain, but at the expiration of this time the patient complained and the solution was again applied. In thirteen minutes more the paring was finished without pain.

"The patient having been in the 'knee and breast' posture for more than a half-hour, and being now fatigued, was placed in Sims' position and allowed to rest for a few minutes. Upon resuming the operation, the introduction of the first two sutures was attended with considerable pain; the solution was therefore again applied, and the remaining sutures, four in number, were introduced without pain.

"The apparent effect of the drug upon the hemorrhage was worthy of note. During the first sixteen minutes of the paring there was very slight oozing, but when the sensitiveness returned the loss of blood was decidedly increased; it diminished very much after the solution was reapplied.

"The sponge was not carefully used before making the application during the introduction of the sutures, and the coagula which formed were seemingly firmer than usual and rather difficult of removal by sponging.

"Drs. T. R. Wright and J. M. Hull, of this city, were present and assisted me."

MURIATE OF COCAINE IN IRIDECTOMY—INJECTION INTO THE ANTERIOR CHAMBER.

DR. EUGENE SMITH, of Detroit, Mich., writes: "Having, during the past three weeks, proved the value of the muriate of cocaine as a local anæsthetic, in strabismus by six operations, in congenital and cortical cataract by four operations, and in iridectomy by three operations, besides several minor operations on the cornea, I wish to lay before the readers of THE MEDICAL RECORD two points in its use which *seem* to render it more efficient. I apply it in the *form of spray with a hand atomizer* and get a more rapid effect, as the movements of the lids and the lachrymal secretion do not carry off the solution as quickly as when *dropped* into the conjunctival sac.

"In my first case of iridectomy with cocaine, while the cornea was insensitive, the *iris* was unaffected by the external application, and its seizure with the forceps was, as usual, quite painful. In two cases of iridectomy, both nervous females, five minutes after spraying the cornea and conjunctiva, I made the corneal incision without pain, then *injected, by means of a small lachrymal syringe, two* (2) *drops of the two per cent. solution into the anterior chamber*, and three minutes later seized the iris with the forceps, drew it out, and completed the operation without causing pain to the patient.

"*No reaction followed its intra-ocular use.*"

FAILURES WITH COCAINE.

DR. F. C. RILEY, of this city, makes a report of two cases in ophthalmic practice which demonstrate that the much lauded new remedy is not always as reliable as might be wished.

CASE I.—Granular lids with intense pannus occurring in a girl of ten years. The photophobia in this case was so marked that, upon facing the patient toward the window in an ordinarily well-lighted room, the eyeball rolled upward and inward to such a degree as to completely hide the whole corneal expanse from view, unless the superior palpebral covering was lifted.

Two drops of a two per cent. solution of Merck's cocaine was instilled, at intervals of ten minutes, for a period of half an hour, or three instillations in all, with no perceptible effect either as regarded diminution of sensibility to light or touch. Neither was there any appreciable effect produced upon the size of the pupil, nor did the drug affect the circulation so far as it was possible to observe it.

Three days subsequent to the preceding trial, I determined upon operating to relieve the pannus, and again tried the same solution, instilling four drops every five minutes for a period of three-quarters of an hour, or in all nine instillations. Careful efforts to touch the conjunctiva or cornea at any part thereof, between each instillation, failed to elicit the slightest evidence of anything even approximating a condition of anæsthesia. Feeling that a fair trial had been given the drug in this case, I proceeded to the use of ether and performed syndectomy.

CASE II.—A lad about twelve years of age, who had a perforating ulcer of the cornea about six months since, with prolapsus of iris into the perforation, etc. Cornea almost completely cloudy or pearly. To the outer and upper segment yet remained a small spot of transparent tissue, at which point I deemed it advisable to perform an iridectomy in order to free the entrapped iris, which seemed to produce a constant irritability of the eye. Vision-perception of light only. Using the same solution of cocaine as in the former case, four drops every ten minutes for forty minutes, with absolutely no effect of any kind, either to cornea or conjunctiva, led me to the opinion that the solution was not what it should be. Subsequent results with the same solution have, however, dispelled my suspicion as to the sample used, as I have since obtained all the physiological effects so far noted by other observers. The two cases recorded, however, seem to me to prove beyond the suspicion of a doubt that there are certain conditions, pathological maybe, or individual idiosyncracies, possibly both, that tend to militate against the verdict so generally expressed thus far in favor of the anæsthetic effects of the drug. It seems to me that in the use of this substance, the cases of failure to obtain the desired end should be placed before your readers as well as the brilliant results obtained by so many of us. That it has been a great blessing to many during its short career there is no doubt, and that it will continue to prevent the attendant pain of many operations in the future I am confident. Even if it gives as universal satisfaction in time to come as it has in my hands thus far, it is indeed a friend to the suffering and distressed.

THE MEDICAL RECORD:

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THE EARLIER EMPLOYMENT OF COCAINE.

WHILE the enthusiasm for cocaine continues but slightly abated in its intensity, a brief reference to some of the results recently obtained, as compared with the earlier records of its employment, may prove interesting.

In 1859 Mantegazza ("Sulle virtù igieniche e medicinali della Coca," pp. 76, Milano) noted the soothing influence exercised by the leaves of erythroxylon coca, when brought in contact with mucous membranes. Literature, however, seems almost unanimous in conceding to Niemann (1860) the credit of being among the first to isolate cocaine and give it a certain amount of physiological individuality.

This investigator is mentioned as having observed several of the now recognized properties of cocaine; but, singular to relate, he stated it possessed no action upon the eye. The postponement of the discovery of its anæsthetic action upon the eye was probably owing to this misleading remark. Its employment in the throat, subsequent to Niemann's observation of its action upon the tongue, furnishes some grounds for such an inference. In 1877 Ch. Fauvel, of Paris (*Gazette des Hôpitaux*, page 427), is reported by Dr. Scaglia as having utilized the anæsthetic property of cocaine to afford relief in painful anginæ. Jelinek (*Wiener Medizinische Wochenschrift*, No. 46, 1884) claims to have successfully employed cocaine to relieve painful deglutition in ulcerative laryngeal phthisis.

Equally interesting are the experiments of Thomas Moréno y Maïz (1868), detailed in his monograph "Recherches cliniques et physiologiques sur l'Erythroxylum Coca et la Cocaïne," pp. 90. The acetate of cocaine was employed in his experiments. Particularly interesting are his observations upon the hypodermic employment of cocaine. He injected a solution of the acetate of cocaine into the leg of a frog, and observed after the expiration of ten minutes distinct loss of superficial sensibility over a circumscribed area; the most powerful irritants failed to provoke motion. In a quarter of an hour the sciatic nerve was laid bare, and sensation was observed to be completely abolished. The conclusion he arrived at, "Pourrait-on l'employer (cocaine) comme anesthésique local," though slowly accepted, has been remarkably well verified.

The employment of the hypodermic method for the painless removal of tumors has been recently followed by excellent results in hospital practice. A body of gentlemen, in this city, composed of willing medical students and intelligent surgeons, have been experimenting with a view to determine the hypodermic effects of cocaine when applied directly to the sensory cutaneous nerves. In twenty minutes after the introduction of fifteen minims of a four per cent. solution, all the parts supplied by the anæsthetized nerve were rendered analgesic. The constitutional effects (vertigo, nausea, etc.), were mild and transient in character. If the inferences deduced from these observations are correct, this property of cocaine to affect all the nerve-terminals when applied to a particular radical must prove of great service for the performance of many major as well as minor surgical operations.

In 1880 Von Aurep ("Archives für Physiologie") elaborated a series of experiments with cocaine, carefully conducted upon warm- and cold-blooded animals and upon himself. Prominent among the results recorded is its action on the pupil.

The value of cocaine for the relief of pain in many acute and chronic affections is now well recognized. It has been employed for this purpose in diseases of the eye, ear, throat, urethra, etc. Injected into the urethra it has converted internal urethrotomy into a painless procedure. The combined employment of cocaine and rhigolene in operations on the nose is recorded in the present issue of this journal.

On account of the high price of the imported article an attempt has been made to produce a domestic preparation of the salt. Aside from those preparations claimed as proprietary, but really consisting of an imported alkaloid combined with a domestic acid, a large proportion of the home-made cocaine has proved unreliable.

DEAD TEETH IN THE JAWS.

WE are in receipt of numerous communications on the above subject, mostly covering ground that has already been gone over, and we have not space to give the matter further attention at this time than to allude to some points in a letter on this subject from Dr. G. V. Black, a dentist of Jacksonville, Ill., who regards this as "simply a question in pathology," and objects to the term "dead teeth," since dentists hold that in death or intentional destruction of the pulp the dentine only loses its vitality; and that while "the tooth is retained in healthy connection with the alveolar process," the cementum and periosteal membrane remain "unaffected" so far as the death of the pulp is concerned. We can but regard this assertion as much too sweeping, since when the greater part of the tooth is in a pathological condition it cannot ever afterward be considered as sound unless it were known that a reparative process began after so great an injury rather than one of a destructive character. The progress of disease in these parts is pretty well understood; it consists, first, in disturbances in the cementum, which immediately overlies and is continuous with the lifeless dentine of pulpless teeth; and, second, in the inflammation of the periosteal covering of the cementum. The acute, subacute, or chronic pericementitis thus established extends itself very often until the nutrition of the cementum is seriously interfered with and destructive inflammation of portions of the cementum follows. This

is finally attended by contaminating secretions which may be absorbed after entering the tissues, or swallowed. But even more danger to the patient may arise from the nervous irritation propagated by these diseased teeth; important regions are often thus affected. Morbific influences of this kind may continue on almost indefinitely without perceptible disturbance in the tooth, and being thus unsuspected, health may be undermined before the cause is discovered. To advise that such teeth are harmless because the local irritation is scarcely perceptible is, in many cases, to bring about irreparable injury to health. While instances of harm from retention of such defective teeth are so frequently occurring in practice, and persons with dental skill are unable to realize the mischief being done, the safer course is to advise that all dead teeth be removed, at least until such time arrives when medical specialists can determine with certainty that teeth are not the seat of any trouble that can possibly injure the patient.

THE REPORT OF THE SURGEON-GENERAL OF THE UNITED STATES ARMY.

The annual report of the Surgeon-General of the Army for 1884 has been received, and, like previous reports, touches upon subjects of general interest. Our army now consists of 20,230 white, 2,309 colored troops, and 210 Indian scouts. Among the white troops there were on the average 1,003, or 50 per 1,000, constantly sick, being a slight increase over the previous year. Of the sick, eighty per cent. were under treatment for disease, and twenty per cent. for wounds, accidents, and injuries. The total number of deaths was 250, or 12 per 1,000, a slight increase over last year, despite the fact that we had no Indian fights during 1883–84.

It is interesting to note that for the first time on record the mortality of the colored soldiers was less than that of the white, it being only 10 per 1,000. The ratio of sickness was very slightly greater among the colored troops. These latter suffered more from venereal diseases and less from intemperance than the white troops. From which it may be provisionally inferred that while the white man takes to wine, the black man prefers the woman.

Comparative statistics show that the white troops are more susceptible to malarial disease than the black, the difference being about 76 per 1,000 of mean strength in favor of the negro.

It is further stated that typhoid fever attacks the whites one-third oftener than the negroes, but that the mortality-rate from this disease is twice as great in the latter as in the former.

Typhoid fever prevailed among the troops more extensively than it has done since the war. It is gratifying to note, however, that the mortality from this disease among the white troops has fallen from twenty-one per cent. to sixteen per cent.

Regarding the Army Medical Museum, the Surgeon-General states that during the year there have been 144 accessions, making a total, June 30, 1884, of 9,114 specimens.

As to the Library, we learn that the additions during the past year include about 4,000 volumes and 5,500 pamphlets. By actual count at the end of the fiscal year the Library contained 65,738 volumes and 86,503 pamphlets.

The need of a new fire-proof building is again insisted upon.

The publication of the third and last medical volume of the "Medical and Surgical History of the War" was delayed by the untimely death of Dr. Woodward. The completion of this volume, however, has been placed in the hands of Surgeon Charles Smart, and it will probably appear soon.

One year ago there were fourteen vacancies in the grade of Assistant Surgeon; since then five officers have died or resigned. During the year, however, twenty-two candidates have been found qualified, and there are now no vacancies in the medical corps of the army.

THE LAST REPORT OF THE NATIONAL BOARD OF HEALTH.

The "Annual Report of the National Board of Health for 1883" reaches us somewhat over a year after its first presentation to Congress. The contents of the report itself in consequence are already in large measure known.

The more active work of the Board as regards quarantine and scientific investigation was suspended by action of law in June, 1883, consequently occasion is taken in the present report to review the history of the four years of the Board's existence.

We learn that in that time there were appropriated for its use $767,500, of which $639,446.19 were expended. The largest sums were employed in sustaining a floating quarantine on the Mississippi. About $36,000 was given to aid the State Board of Health of Tennessee, while sums of from three to eleven thousand dollars were given to help other localities. About $35,000 was spent in special scientific investigations.

The sum appropriated for the Board in 1882 was but $50,000, while in 1883 the annual appropriation was cut down to $10,000.

The work of the Board has consisted mainly in assisting, by advice and money, local health authorities, in establishing maritime quarantine stations, in inaugurating an interstate and immigrant inspection service, in securing the co-operation of the United States consuls, and in prosecuting certain scientific investigations. Owing to the lack of funds, the immigrant inspection service has now been discontinued, the Mississippi Valley inspection service has been transferred to the Sanitary Council of the Mississippi Valley, the maritime quarantine stations have passed to the care of the Marine Hospital service, while the scientific work has been entirely abandoned.

The Board requests that the powers originally conferred upon it be restored; meanwhile it asks that the sum of $37,700 be appropriated for actual expenses and to enable it to perform the duties required of it by the second section of the Act of March 3, 1879.

Appended to the report are several scientific communications and special reports. The articles on "Beriberi in Ceylon," on "Leprosy in Maracaibo," on "The Filaria Disease," and the reports on cholera in Japan and in China, are of especial interest.

SOME FACTS ABOUT ADULTERATED DRUGS.

Dr. Bennett F. Davenport, Food Inspector of Massachusetts, makes a brief report in *The Sanitarian* of some of the results which he has obtained in examining for adulterations in drugs under the excellent law of his State.

Under this act the last version of the United States Pharmacopœia is made the standard.

Dr. Davenport during his first year examined about three hundred samples of pharmacopœial drugs, and found that about forty per cent. did not conform to the requirements. Among the drugs examined were one hundred samples of tincture of opium. Of these four only exceeded the maximum allowable strength of 1.60 per cent. morphine according to the 1880 Revision of the United States Pharmacopœia; while eighty-two fell below the minimum allowed of 1.20 per cent., forty-three only fell below the about 0.90 per cent. morphine which, according to the Revision of 1880, was the quantity required by the Revision of 1870. Their average strength was 0.965 per cent. morphine, the extreme being 0.336 and 1.87 per cent.

It is thus shown that some samples of laudanum are nearly six times stronger than others. Dr. Davenport also concludes that there is much greater apparent than real change in the strength of laudanum made according to the 1880 Revision of the United States Pharmacopœia.

Of the simple cinchona alkaloid salts about twenty-five per cent. were found to contain an excess of the cheaper alkaloids.

About two hundred samples of powdered pharmacopœial drugs were examined microscopically, and about twenty per cent. were found to contain foreign ingredient, or rather appeared so, for it is not common now as formerly that totally foreign substances are introduced, but it is the closely allied and inferior varieties, or damaged samples and trimmings of the very same drug, that are used. Millers now, says Dr. Davenport, study structural botany, and are becoming as expert as those whose duty it is to expose their improper practices.

The excellent suggestion is made that there be organized in this country a Society of Public Analysts similar to that which has done so much good work in England.

The results, on the whole, of Dr. Davenport's examinations are not calculated to excite alarm. They show that druggists are slow in adopting the changes of the last Pharmacopœia, and that manufacturing pharmacists are inclined to make their preparations a little weaker than the standard.

THE CLINICAL DEPARTMENT OF THE RECORD.

The very large number of short clinical communications sent to us by our readers in all parts of the country has been a source both of gratification and perplexity. While conscious of their practical value it has often been impossible to give them either the space or the prominence they deserve. We have resolved, therefore, to remedy the matter in a measure by establishing a Clinical Department in which the choicest and most original articles received will be placed, and published in such a way as to call to them proper attention. The present issue of The Record contains the first instalment of these clinical notes, and we feel sure that now and hereafter they will form a most attractive and instructive feature in our pages. It is hardly necessary to say to our contributors that communications for this department should be brief, practical, and to the point, and should express some actual lesson taught by the writer's own experience. For the rest, clinical notes may cover the whole range of practical medicine, surgery, obstetrics, and therapeutics.

THE ABUSE OF SUBSCRIPTION CLUBS.

It may be charged that we are writing with a bias, nevertheless we cannot refrain from making a little protest against the abuse of subscription clubs. It is a very widespread practice among the physicians of towns and cities to club together and take a number of medical journals. This is a wise and economical plan, up to a certain extent; but every physician ought to have one or two journals as his own personal property, and the subscription club not infrequently prevents this. It is not the hasty week-to-week reading of numerous medical journals which is helpful to a doctor. He must have the volumes on his shelf to refer to in studying his cases or preparing his papers. It is an essential now in medical writing that the author know what has been said already on his subject. Still more important to the practitioner is it that he prescribe no therapeutical measure that has already been shown to be useless, and that he leave his patient with no remedy untried. To a practitioner the bound volumes of his standard medical journal are more valuable than text-books. We speak what is only the ordinary teaching of good sense, therefore, when we say that it is neither wise nor economical for a doctor to depend alone upon a weekly visitation of a few journals for his scientific culture, or to keep him really abreast of the medical progress of the day.

FURTHER DISCOVERIES IN CHOLERA, AND CONFIRMATIONS OF KOCH'S VIEWS.

We learn that Dr. Rudolph Emmerich, of Munich, who has been studying the cholera in Naples, has discovered a peculiar micro-organism in the blood and tissues of persons affected with that disease. This organism already goes by the name of the "Emmerich Bacillus." It was found in the internal organs and blood in nine autopsies, and in the blood from the arm of one living cholera patient.

Dr. E. Van Ermengen has communicated to the Microscopical Society of Belgium the results of his pathological studies of cholera. He has made eight autopsies and thirty-four examinations of stools. The comma-bacilli have been cultivated, and successfully inoculated in dogs, rabbits, and guinea-pigs. His conclusions are almost identical with those of Koch. He says:

"The pathogenic action of these products of cultivation is very likely due to a zymosis, to an unstable albuminoid compound. Corpuscles of fresh human blood placed on Ranvier's heated platinum, and brought into contact with a drop of a serum-culture, present characteristic changes wholly comparable with those described by MM. Nicati and Rietsch in their observations on the blood of choleraic cases.

"The discovery of the comma-bacillus is of the greatest importance in the diagnosis of choleriform attacks of

doubtful nature which occur at the commencement of epidemics, and for the resort to more effective prophylactic measures which this early diagnosis allows.

"The employment of bacterioscopic methods in the diagnosis of cholera does not offer any great difficulty in practice, and it would be very desirable, in view of the serious threats of an invasion of Belgium by cholera, that a sufficient number of physicians employed in the sanitary services should be initiated therein with the least possible delay."

News of the Week.

NINTH INTERNATIONAL CONGRESS.—The committee on organization has elected the following officers: *President*—Dr. Austin Flint, Sr., New York; *Vice-Presidents*—Drs. Alfred Stillé, Philadelphia; Henry I. Bowditch, Boston; R. P. Howard, Montreal; *Secretary-General*—Dr. J. S. Billings, U. S. Army; *Treasurer*—Dr. J. M. Brown, U. S. Navy; *Members of Executive Committee* (in addition to President, Secretary-General, and Treasurer)—Dr. I. Minis Hays, Philadelphia; Dr. A. Jacobi, New York; Dr. Christopher Johnston, Baltimore; and Dr. C. Busey, Washington. The meeting is to be held in Washington, D. C., in 1887. The membership will be composed of delegates from each of the regularly organized general, State, and local medical societies. The official languages will be English, French, and German. The published discussions will be in English; and the papers in the languages in which they are delivered. The work of the Congress will be divided into eighteen sections. The detail of organization is to be entrusted to the Executive Committee.

DR. LIVINGSTON S. HINKLEY, of New York City, has been appointed Medical Superintendent of the Essex County Asylum for the Insane, Newark, N. J.

IN CASE OF CHOLERA.—The Board of Estimates and Apportionment of this city has added $50,000 to the estimate for the Health Department, to be used in case of cholera. This is very well, but an additional sum ought to be given at once for the purpose of preventing the cholera's entrance.

POLITICS AND SANITATION.—There can be little doubt that the New York City Health Board is seriously crippled by bad political influences. It is an open secret now that the Board has not suppressed the manure dump nuisances because the owners of them were of too great political importance. The slums and unhealthful tenements of the city cannot be cleaned or improved in many cases because their owners possess too much power in the wards. The President of the Board of Health was appointed as the result of a "deal" between Tammany Hall and the Republican machine.

CAUTION IN THE USE OF COCAINE.—Since the paper of Dr. Knapp (vide page 656) was in type we have received the following note from that gentleman: "Will you allow me to add a word of caution to the communication on 'Cocaine' which I sent you a week ago. I injected 6 minims of a four per cent. solution into the orbit, close to the posterior segment of the eyeball. The anæsthesia in that part was complete, and the operation and recovery of the patient were without any disturbance. During the operation I noticed that the patient's face became quite pale. I omitted to mention this in my communication, as the patient did not complain. To-day, likewise, at the University College Clinic, I injected 5 minims of a three per cent. solution underneath a sebaceous tumor, the size of a small walnut, situated in the centre of the upper lid. The anæsthesia was almost complete, and the somewhat laborious operation passed satisfactorily, but during it the patient became as pale as a corpse, felt somewhat faint, asked repeatedly for drink, and was covered with cold perspiration. In about fifteen minutes this condition of distress, which was, however, in no way alarming, disappeared. Though much larger doses—Hepburn, Hall, etc.—have been hypodermically injected before general symptoms manifested themselves, I think that five or six minims of a three per cent. solution may be too much for the orbit. The orbital cellular tissue is so vascular that it resembles cavernous tissue. Liquids injected into it may enter the general circulation more readily than from other parts. In further operations I shall inject no more than one or two minims, and gradually feel my way. I beg you, dear doctor, to grant this note a place in your columns, for I would deeply regret if my previous communication should be the cause of an unpleasant accident by inducing somebody to inject too large a dose of cocaine into the orbit."

NEW YORK ACADEMY OF MEDICINE.—At the stated meeting held December 4, 1884, the following nominations were made for officers. *For President:* Drs. Samuel T. Hubbard, A. Jacobi, William T. Lusk, T. Gaillard Thomas, and C. R. Agnew. *For Vice-President:* Drs. C. C. Lee and T. Addis Emmet. *For Corresponding Secretary:* Drs. Paul F. Mundé, H. Knapp, and L. Elsberg. *For Trustee:* Drs. H. T. Hanks, A. L. Loomis, J. Williston Wright, E. Eliot, and Frank H. Hamilton. *For Member of Committee on Admissions:* Drs. William M. McLaury, Seneca D. Powell, A. S. Hunter, C. A. Leale, L. Elsberg, and J. A. Wyeth. *For Member of Committee on Medical Education:* Drs. Joseph D. Bryant, F. R. Sturgis, and Stephen Smith. *For Member of Committee on Ethics:* Drs. A. Hadden, A. S. Hunter, T. G. Thomas, T. E. Satterthwaite, and Andrew H. Smith. *For Member of Committee on Library:* Drs. E. Darwin Hudson, Jr., and George M. Lefferts.

COCAINE OINTMENT FOR PILES.—Dr. F. A. Burrall writes: "Please mention in your coca literature that the coca leaves treated with heated lard and an alkali, form an ointment resembling stramonium ointment, which seems to possess soothing properties. Applied to the tongue it leaves an impression similar to that produced by a solution of muriate of cocaine. This ointment, prepared at my request by a leading pharmacist of this city, has been used in three cases of hemorrhoids with the effect of alleviating pain. The muriate of cocaine will, I think, be found of service in such cases, and this alkaline ointment is also worthy of further trial as a local anodyne."

DR. W. B. DE GARMO has been appointed Assistant to the Chair of Orthopædic Surgery in the New York Polyclinic.

Dr. R. W. Wilcox has been appointed one of the Assistants to the Chair of Neurology at the New York Post-graduate Medical School.

The Discoverer of the Anæsthetic Powers of Cocaine.—Dr. W. Oliver Moore writes that, in a letter received last week from Dr. Koller, it appears that he not only first used it on the eye, but suggested its use on the throat to his laryngological friends in Vienna, instead of getting his idea *from them*, as has been inaccurately reported in many of the journals. Dr. Koller is second physician to the Vienna General Hospital.

Insane Asylum Reform.—Much disturbance has been excited in the Cook County Insane Asylum recently over the revelations in the past management of the institution recently brought out. The asylum, although built for only 300 patients, has been made to hold 558. It has been managed by local politicians, and the officers and attendants have been more skilled in politics than in the care of the sick. Dr. Clevinger, special pathologist, recently made specific charges against the warden, matron, and other employees. An investigation has followed. We learn, however, that the Commissioners, after a recent visit, decided that everything was in good condition, and ended their reformatory toil with a champagne supper. The trouble excites renewed interest in the subject of the prostitution of medical charities to politics. We call to it the attention of that useful but polynomial organization, the National Association for the Protection of the Insane and the Prevention of Insanity.

Insusceptibility to Vaccination.—English statistics show that about one infant in every thousand is insusceptible to vaccination.

Tracheotomy Aspirators.—One result of the sad death of Dr. Rabbette has been the invention of several forms of apparatus for sucking secretions from the tracheal wound. One of the simplest of these is made on the principle of a dry-cup with a rubber ball.

Proffered Contribution to the Edinburgh Medical School.—Mr. William McEwan has offered to give $25,000 to the Edinburgh Medical School, provided $50,000 is raised from other sources. The sum of $75,000 is needed to complete and furnish the building.

Charges against Russian Hospitals.—At a recent meeting of the St. Petersburg Health Committee, some statements were made which throw a sinister light on some of the Russian hospitals and nurses. Professor Botkin, speaking of the large death-rate in the St. Petersburg hospitals, said: "I have come to the conclusion that the patients die mostly from weakness, for, with their daily allowance of thirteen or fourteen copecks, they cannot even buy a pound of beef for broth. In addition to this, the nurses, who are very badly paid, steal the food of the patients whenever they can." Considerable surprise is also sometimes expressed in St. Petersburg society at the rapid growth of wealth among hospital authorities.

The Ingestion of Cholera Bacilli and Cholera Dejecta.—While Dr. Klein has swallowed cholera bacilli in pure cultures, Dr. Bochefontaine, chief of Vulpian's laboratory, has swallowed pills composed of a drachm of diarrhœic fluid from a cholera patient. Dr. B. was a little ill the next day, but had no choleraic symptoms whatever. We observe that attempts are made to discredit the value of the above experiments. This is unjust, however. If Dr. Klein swallowed the true bacilli without harm, while in a cholera country, he added to the cholera question some negative evidence at any rate. Dr. Bochefontaine's experiment tends to show also that some peculiar individual factor is necessary for the development of the disease.

Death of M. Fauvel.—The death of M. Fauvel, the celebrated French sanitarian, is announced.

Then and Now.—Fifty years ago there were hardly any such things as dispensaries or out-patient departments. Now in every large city a fourth of the inhabitants (if we go by reports) are annually treated for nothing. The effect has been to make the early attainment of professional skill more easy, but the early attainment of paying professional practice more difficult.

The most Powerful Antiseptics.—Studied by their power to prevent the development of micro-organisms in sterilized broth, the biniodid of mercury stands at the head of the list of antiseptics. It is three times as strong as the bichloride. A solution of a $\frac{1}{40000}$ strength renders life impossible to any form of microbe, says M. Miguel, while of bichloride the strength must be $\frac{1}{14000}$. Iodide of silver is also more powerful than the bichloride of mercury.

Board of Medical Examiners of the State of Virginia.—The Governor of Virginia, William E. Cameron, has approved of each of the nominations of the Medical Society of Virginia made during its last session. Of the thirty-two members, only one is "not regular."

Subcutaneous Vaccination.—Bourgeois, in the *Bulletin général de Thérapeutique*, recommends the subcutaneous injection of vaccine lymph in place of the endermic method. He has employed the new method with success.

A Bust of Dr. J. Marion Sims.—A bronze bust of Dr. J. Marion Sims by Dubois, of Paris, has been placed in the rooms of the Medical Library Association in Boston. It is the gift of a lady who was successfully treated by Dr. Sims.

The Rugby Game of Foot-ball.—The decision of the Athletic Committee of the Harvard College Faculty, that the game of foot-ball, as at present played, is "brutal," "demoralizing," and "extremely dangerous," is no more than should be expected. For our part, we can only repeat what we have said, that the Rugby game is fitted only for small boys and trained pugilists. It utterly fails as an athletic sport.

Meaning of the Word Pharmacology.—A correspondent writes: "Of late the word pharmacology is being used. I would like to know its meaning. Webster defines pharmacology as 'the science or knowledge of drugs, or the art of preparing medicines.' *The Lancet* of August 16, 1884, speaks of pharmacology, *or the physiological action of drugs*. Dunglison's Medical Dictionary (1874) gives no definition for the word whatever." The term pharmacology means the science of drugs and drug ac-

tion from all possible points of view. The word has lately been much used for "experimental pharmacology," or the study of the physiological action of drugs.

The United States Marine Hospital Service afforded relief to 44,751 patients during the year 1883–84, of whom 13,078 were treated in hospitals, and 31,673 at the dispensaries. The receipts from all sources were $421,348.59, and the expenditures $465,387.45.

The United States Life-Saving Service was instrumental in saving 4,237 lives last year.

Reviews and Notices.

The Visceral Neuroses; being the Gulstonian Lectures on Neuralgia of the Stomach and Allied Disorders, delivered at the Royal College of Physicians in March, 1884. By T. Clifford Allbutt, M.A., M.D., Cantab., F.R.S. 8vo, pp. 103. Philadelphia: P. Blakiston, Son & Co. 1884.

The publishers of this little volume have done a service in giving Dr. Allbutt's lectures to the American public. The writer is an original thinker and vigorous and charming writer. In his too infrequent contributions to medical literature he has shown that he touches no subject which he does not adorn. Nor has he failed in the present case. Attention is called to a class of ailments that are not sufficiently recognized and understood by the profession in general. We need not go into any analysis of these lectures, since proper reference was made to them in The Record when they first appeared. We simply commend them most heartily to American readers.

Transactions of the Louisiana State Medical Society at its Sixth Annual Session, held at Baton Rouge, La., May 21, 22, and 23, 1884.

Proceedings of the Connecticut Medical Society, 1884. Ninety-third Annual Convention, held at New Haven, May 28th and 29th. New Series, Vol. iii., No. 1. Hartford, Conn.: S. B. St. John, M.D., Secretary, Hartford.

Transactions of the Medical Society of the State of California, during the years 1883 and 1884. Sacramento: 1884.

Transactions of the Medical Society of the State of West Virginia. Session of 1884, May 21st and 22d.

Transactions of the Medical and Chirurgical Faculty of the State of Maryland. Eighty-sixth Annual Session, April, 1884.

These volumes contain many excellent reports and papers. We note, however, that most, if not all of these have appeared in various medical journals, and they do not require comment here.

Correspondence.

THE VOMITING OF PREGNANCY—DILATATION OF THE CERVIX UTERI.

To the Editor of The Medical Record.

Sir: The report in your last issue of the discussion at a late meeting of the Northwestern Society has been noted as incorrect and incomplete by several of the gentlemen who took part in it. My own remarks on the treatment of the vomiting of pregnancy by dilatation of the cervix were made late in the evening, and, as they stand, are simply unintelligible.

I ask your leave to correct them and to add mention of another case in point. The report should be as follows:

Dr. Chamberlain said that he read the paper of Dr. Copeman when it first appeared, and had since employed its methods with satisfaction. He would also remind the gentleman (Dr. Wylie) of a paper by Dr. Engleman, published in the "Gynecological Transactions."

I am accustomed to regard the nausea of pregnancy as, for the most part, a neurotic phenomenon. The reflex actions arising from the uterus seem to start mostly from its cervical portion. This is the most important portion of the organ. At birth, and even up to the approach of puberty, that portion of the womb which is between the vault of the vagina and the peritoneal reflection over the bladder and the rectum, equals in volume all the rest of the uterus.

As the long bones develop upward and downward from the diaphyses, so from this centre the vaginal portion develops downward and the fundal portion develops upward. Through this area the uterine arteries and the spinal nerves enter the womb, and here, in the cervical portion, is the centre of neurotic activity. I have repeatedly dilated the cervix to bring on delivery in cases of convulsions, and have almost uniformly seen the convulsions cease as soon as the dilatation was well advanced.

Repeatedly, if not constantly, when I have dilated the cervix to suppress the vomiting of pregnancy, the proceeding has been successful. I recall the case of a lady having a small fibroma in the posterior wall, which acted like a ball-valve over the os internum. She became pregnant and suffered from a nausea so intense and persistent that she was dependent entirely upon rectal alimentation. I dilated the cervix, the vomiting ceased and did not return.

Undoubtedly there are cases, such as Dr. Harrison has cited, where a structural change may be the cause of the vomiting, and when, as Dr. Wylie has said, there is disease of the cervical mucous membrane, the treatment should be of the mucous membrane; but I am confident, nevertheless, that there is a kind of spasm at the os internum which may be remedied by the process of dilatation, and which is the cause of a great many cases of severe vomiting in pregnant women.

Rectal tenesmus is cured often by forcible dilatation of the anus, and tenesmus of the neck of the bladder is often cured by dilatation of urethral stricture.

The case in point mentioned is as follows:

About three hours after the above remarks were made I saw in consultation a case of puerperal convulsions. The woman, a multipara, was expecting confinement in about a month, but had not notified her physician until a few hours previously, and then on account of intense cephalalgia suddenly developed. There was some œdema, partial suppression of urine, which was heavily loaded with albumen, and embarrassed respiration. There was frequent grumous vomiting. There had been one severe and prolonged convulsion, and lesser spasms.

She was hardly semi-conscious, apparently not recognizing what was going on about her, and moaning continuously with the intense pain in the head.

We wished to bleed, but were not allowed to do so. Two drops of croton-oil were administered, and dilatation was begun with the fingers, and continued with Barnes' bags. In half an hour it was so far advanced that the largest bag was distended with nearly a pint of warm water. No anæsthetic was given. The convulsive movements ceased, she lay quiet, and no longer moaned. Three hours later she was naturally delivered and at last accounts was doing fairly well. I have not personally seen her since the day of delivery.

This was the third time within little more than one year that I had met the same gentleman in such a case of uræmic coma and convulsions. In all three cases the eclamptic phenomena ceased when full dilatation was secured, and did not return.

W. M. Chamberlain, M.D.

68 West Fortieth Street, December 6, 1884.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 4, 1884.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

THE STATISTICAL SECRETARY reported the death of Allen S. Church, M.D.

DR. JOSEPH E. WINTERS read a paper (see p. 645) with the following title :

IS THE OPERATION OF TRACHEOTOMY IN DIPHTHERITIC CROUP DANGEROUS?—WHEN SHOULD THE OPERATION BE PERFORMED.

DR. J. WILLISTON WRIGHT opened the discussion, and said that he did not regard tracheotomy as an especially difficult operation. He was well aware that when undertaken, as it frequently was, in the middle of the night, perhaps in a tenement-house, by the light of a tallow candle or a dirty kerosene lamp, with such assistants as one could under those circumstances obtain, it was an operation which almost every surgeon approached with some sense of misgiving, and especially as it usually occurred in such cases in young children with a short neck and a deep trachea. These difficulties, however, were not so great but that they might all be surmounted by one who pretended to understand anything of surgery, coupled with a cool head and a steady hand.

The incision for the operation was a simple one, involving the skin and fascia chiefly. Then came the separating of the space between the muscles which were in front of the neck, and, in doing this, the operator reached a mass of connective tissue and veins which, if wounded, frequently bled profusely. If the operator at that time was impressed with the hemorrhage which was going on, and undertook to arrest it before opening the trachea, he would probably consume the remainder of the night in so doing. However, if the case was not urgent, it might be proper to arrest some of the hemorrhage, even supposing it to be simply venous. Arterial hemorrhage, if the incision was made properly, was seldom troublesome.

On the other hand, if the case was an urgent one, one demanding immediate relief, the child dying with asphyxia, his custom was to ignore this venous hemorrhage and go on into the trachea, feeling very certain that, as the author of the paper had stated, this venous hemorrhage would usually stop as soon as the knife entered the trachea, or at least as soon as the tube was introduced.

Concerning the entrance of blood into the trachea, he had usually regarded it as a matter of no special importance. On the contrary, it had seemed to him to be the very thing needed to stimulate violent expulsive efforts which rid the trachea of mucus as well as of blood.

In that sense, therefore, he did not regard tracheotomy as either an especially difficult or dangerous operation. He regarded tracheotomy in the adult as one of the simplest operations in surgery. In the young child the operation was facilitated by placing under the neck a common wine bottle wrapped in a napkin, and allowing the head to hang over it.

With regard to the isthmus of the thyroid body, in operating in urgent cases he would be inclined to cut through it with the knife; but, on the other hand, in cases where securing of time was not so much the object, he would surround the two sides of it with a ligature and divide the tissues between the ligatures, as stated by Dr. Winters. If, however, the child was practically dead when placed upon the table, he would not stop for this mode of procedure.

As to the time at which tracheotomy should be resorted to, he was of the opinion that it should be performed early—that is, as soon as severe symptoms made their appearance which were not relieved by ordinary medical measures; in that respect he agreed with the author of the paper. If the diagnosis of membranous croup, or of diphtheritic laryngitis was well made out, he believed that the sooner the patient had the opening made into the trachea the better were his chances of getting well.

The operation, in his judgment, was not in any sense the cause of death, except, possibly, it might lead to secondary affections, but not more so than a simple incision made elsewhere.

His feeling with reference to early operation was so strong that, if the diagnosis was reasonably correct and he was unable to get anyone to perform the operation on one of his own children or a near friend, he would perform tracheotomy himself. Still further, he would perform the operation upon himself under the same circumstances were he unable to get a surgeon to perform it. He had performed the operation once with an ordinary pocket-knife in a case of foreign body in the larynx.

DR. A. JACOBI thought that the discussion should not be so much upon the general subject as upon the elaborate paper of the evening. The subject had claimed the attention of almost numberless writers for the last two generations, a fact which was proved by Dr. Winters' paper, which teemed with quotations gathered for the purpose of proving that there was no danger from tracheotomy. The author of the paper had quoted from writers on both sides of the question, but had rested upon the side of those who considered that tracheotomy was not a dangerous operation, and at this point Dr. Jacobi entered a criticism, in that the author had not stated why he did not consider tracheotomy as a dangerous operation. We should know first what the dangers were and then see if they could not be overcome. Dr. Winters had searched the literature of old Europe apparently from beginning to end, but had made mention of only one American operator, namely, Professor Gross, and in that instance almost only for the purpose of showing that Professor Gross was guilty of contradictions in his own writings, so much so that it was scarcely possible to say whether Gross really regarded the operation as dangerous or simple and easily performed.

Dr. Jacobi would have been pleased to have had more extended reference made to American operators; for example, Dr. Gay, of Boston, who published an excellent paper on this subject not many months ago, and in our own midst he could recall excellent papers by Hadden and Ripley, each of which contained a vast amount of knowledge and solid experience. More than this, there were other men in other cities who had performed the operation, and had reported a large number of cases. He thought we could have learned something from the experience of these surgeons.

With regard to the dangers of tracheotomy, the principal one was that it was usually a bungling operation, and by bungling operation he meant a bloody operation, which is not infrequent in unskilful hands. The principal thing in performing the operation was to be as considerate and slow as possible, for by so doing hemorrhage could be avoided. If the tracheal cartilages which were to be cut could be *seen* distinctly the dangers from hemorrhage would be avoided. If it was not desirable to operate below the isthmus, if there was not sufficient room to perform the operation there, Bose's operation might be performed, which consisted in pulling off a part of the isthmus. Cutting through the isthmus would give rise to some hemorrhage, and to cut through it was a mistake. Nevertheless, it must be done when the case was an urgent one, and, under those circumstances, it might be forgiven; but if there are two or three minutes to spare the isthmus should not be cut.

Dr. Jacobi was not of the opinion expressed by Professor Wright, that is, to cut directly through the isthmus when it bleeds. He had seen such operations, and he had not been able to find the trachea on account of the blood, and

had lost a patient under such circumstances. He did not regard it as an indifferent matter whether blood was drawn into the trachea or not. It was true the child coughed afterward, and threw out a good deal of the blood, but would the child throw out everything? No. Even when the child was healthy it would throw out some blood as late as ten or twenty minutes after the operation, if all of it ever came up. When blood had entered the smallest bronchi it had the same influence which a small amount of viscid mucus would have in the same position. Broncho-pneumonia in children was usually a consequence of simple bronchial catarrh. In those cases the smallest bronchi were filled with mucus, and behind them the air-cells contracted, the blood-vessels in their immediate neighborhood dilated, congestion followed, and finally broncho-pneumonia developed. Therefore, if blood entered into the smallest ramifications of the bronchi, a very frequent result was broncho-pneumonia and death, and that result could be averted by avoiding hemorrhage, and hemorrhage could be prevented by taking a little time before the trachea was opened, which in the large majority of cases could be accomplished. First *see* the trachea, and then cut into it.

There was another cause of danger. From the *résumé* of the literature given by the author of the paper it seemed that a large number of the old authors were opposed to the operation, and a large number of modern authors were not opposed to it, and why? The old surgeons operated before chloroform was discovered, or were afraid to use it, and the discovery of chloroform was only about thirty years of age. Billroth published his experience in the University of Zurich twelve or fourteen years ago, in which he declared that tracheotomy was the most formidable operation which he had ever been called upon to perform. He had not used chloroform, and that it was which made the operation so serious. Dr. Jacobi was decidedly of the opinion that anæsthetics should be used, as the occurrence of death during the operation was much more rare than when they were omitted. He then referred to cases in which children had died, struggling against nurses who took them out of bed for the purpose of making a simple nasal injection, and if babies were operated upon without the aid of an anæsthetic many would be killed who would have been saved had an anæsthetic been administered. He preferred chloroform decidedly to ether, because it took too long to bring the patient under the influence of ether.

Here, then, were the principal dangers: first, in not using chloroform, and, second, from hemorrhage.

At what stage of croup should the operation be performed? The author of the paper had stated that if the diagnosis was correct we should not wait. Dr. Jacobi was of the opinion that we should not wait until we were sure that it was a case of membranous croup; for there were some cases of croup which were not membranous. He would say that whenever there was laryngeal stenosis which would positively lead to death, operate, even if the diagnosis of the presence of membrane had not been made.

Dr. Jacobi objected to dividing croup into several stages, especially with reference to the operation; for, in some cases the symptoms demanded tracheotomy immediately. He would operate when he knew that there was laryngeal stenosis, a considerable amount of recession in the supra- and infra-clavicular regions and in the region of the ensiform process, and when he knew that these symptoms had had a duration of several hours, or sometimes several days, and that dyspnœa had been increasing rapidly, particularly in the morning only; for in the evening the symptoms are as a rule aggravated; when there was cyanosis and frequent pulse, then he would operate at once by all means. Under such circumstances we should not ask whether or not there was a membrane or some other obstruction.

It was true that diagnosis should be clear to a certain extent. There must be, of course, laryngeal stenosis, or the long-drawn-in inspiration which alone justified us in assuming that the stenosis was not in the larynx alone. Pneumonia was not a contra-indication of tracheotomy.

What could be done in cases in which there was a general constitutional diphtheritic sepsis? Decidedly much could be done under those circumstances. In such cases there was a strong indication for the operation, for this reason: as soon as the windpipe was opened the fetid inhalations from the nose and throat were removed from the lungs, which was an immense advantage. A large number of children died in consequence of these fetid inhalations. While formerly constitutional diphtheria, complicating diphtheritic croup, was considered a contra-indication to tracheotomy, Dr. Jacobi was upon the opposite side, and believed that this was one of the principal indications for the performance of the operation. In other cases we might wait a little, because of the benefit which might accrue from the use of internal remedies, and he was still of the opinion expressed in his paper read in May last, that benefit could be derived from the use of mercurial preparations. In cases of membranous croup these preparations should be tried in addition to the measures which have already been in general use. Since he had resorted to the mercurial treatment he was positive that he had saved a large number of patients, and that his percentage of recoveries without tracheotomy was much larger than it had ever been before.

Of what did the children die when tracheotomy was performed? They might die of diphtheria, but they would die of diphtheritic sepsis whether the trachea was opened or not. They might die of paralysis, of nephritis, of hemorrhage, and they might die in consequence of adenitis with gangrene occurring, perhaps, in such enlarged glands, with hemorrhage from rupture of blood-vessels by the gangrenous process. Croupous pneumonia was not so infrequent, simply as a complication of diphtheria, and very probably due to the same cause.

But the principal causes of death after tracheotomy were broncho-pneumonia, or œdema of the lungs, or descending diphtheritic membranous process. Children were apt to die of broncho-pneumonia two or three days after the operation. Pulmonary œdema might occur and kill within a few hours after the operation. Within the last ten or fifteen years he had seen a large number of patients die of descending diphtheritic process. The process would descend into the trachea and bronchi sometimes to the third bifurcation. These children would die almost at a certain hour; that is, between fifty and seventy hours after the operation. But the descending process could be relieved in many cases by the introduction of oxygen into the circulation.

In saying what he had in the way of criticism he had also meant to say that he appreciated the value and importance of the paper, one which was well worthy of close attention, for the purpose not only of gathering material for criticism but also valuable information.

Dr. J. Lewis Smith said: "All who have seen much of tracheotomy are for the most part agreed as to the dangers which attend it. The younger the child the greater the danger, so that in infancy the operation is more difficult and dangerous than in childhood. I have observed two conditions which greatly enhance the dangers in opening the windpipe. One is the late performance of the operation, when the patient is nearly moribund and the operator is impelled to operate in the quickest possible time in the fear that the patient will die on the table. He does not have time to pick his way cautiously between the blood-vessels, consequently, there is greater hemorrhage, and the trachea is opened before the bleeding entirely ceases. The second condition is when the operator does not fully appreciate the difficulties in the way, and undertakes the operation when poorly prepared with instruments, and in other ways. Such a case was the first tracheotomy which I witnessed. Soon after my

graduation a young physician, full of confidence, met me in the street, and wished me to hold a child while he operated. Unfortunately the patient was an infant, with short neck and fleshy. He was restless during the cutting, and died from the abundant hemorrhage before the trachea was reached. Inexperience and the lack of proper appreciation of the difficulties attending tracheotomy therefore increased greatly the dangers of the operation. From the tenor of the paper to which we have listened, the young physician might be led to suppose that tracheotomy is a simple procedure and attended by little risk or difficulty, but I would strongly advise one who operates for the first half dozen times to have with him a physician or surgeon who is familiar with tracheotomy, for he is apt to be confronted in the operation by unexpected difficulties, as the presence and abnormal distribution of large blood-vessels. In the city such help is readily obtained, but in the country it might be more difficult.

"In considering the time when tracheotomy should be performed, it seems to me convenient to recognize two classes of cases. When croup commences in the beginning of diphtheria the inflammation is active, the exudation occurs rapidly, and a thick pseudo-membrane soon forms, causing a laryngeal stenosis which is apt to increase from hour to hour in spite of our inhalations and medicines. In such cases I think we all agree that the earlier tracheotomy is performed the better. In other instances diphtheria has continued a few days and the acute stage has passed when croup begins, the exudation is poured out less rapidly and less abundantly, the stenosis is not so urgent, and the patient not infrequently, in the type of diphtheria now prevailing, recovers by inhalations and medicinal treatment. While, therefore, in the one class of cases the rapidly increasing stenosis is such as to render recovery almost impossible without surgical interference, in the other class of cases the subacute character of the inflammation and the slowness of the exudative process give more time for the action of medicines, so that perhaps tracheotomy may be avoided. During the last few months I have seen two patients recover from marked larngeal stenosis due to croup commencing at the close of the first week, or in the second week of diphtheria. In both there was membranous exudation on the fauces, and such dyspnœa that the post-clavicular and infra-mammary regions were depressed on inspiration, but the dyspnœa was not progressive, the suffering was not marked, and time was allowed for the action of alkaline inhalations and medicinal measures, and tracheotomy was fortunately avoided.

"If, therefore, there is marked and increasing laryngeal stenosis, notwithstanding well-directed and energetic treatment, and the patient begins to suffer from lack of air, all of us, I think, would advise early tracheotomy, but in the other class of cases it is proper to wait and tracheotomy may not be necessary.

"The position taken by the writer that we must be sure of the presence of a pseudo-membrane in the larynx before deciding to operate, I agree with Dr. Jacobi, does not seem to me well taken. It is difficult to inspect the larynx with the laryngoscope when the fauces are much swollen, and the stenosis may be such as to require tracheotomy when there is no pseudo-membrane in the air-passages. Trousseau has pointed out that there may be even a faucial pseudo-membrane while the obstruction in the larynx is due to the infiltration and thickening of the mucous membrane. In at least two cases in the New York Foundling Asylum in which death occurred from croup, no pseudo-membrane was found in the air-passages, but thickening of the mucous and submucous tissues sufficient to cause fatal stenosis. The indication for tracheotomy is the amount of obstruction and dyspnœa, rather than the presence or absence of a pseudo-membrane. Those who believe that there is no remedy for croup except tracheotomy, would be likely to advise the operation in all cases, when there is marked dyspnœa, but I am sure that a considerable number may be relieved without tracheotomy by the judicious use of calomel in a few doses at the commencement, perhaps by one or two doses of the turpeth mineral to which our esteemed President called attention several years since, by the use of the bichloride of mercury, and especially by the persistent use of alkaline inhalations."

Dr. John H. Ripley had been interested in the paper of the evening, especially as the author had taken a position quite antagonistic to that which he himself occupied. Dr. Winters' position with regard to the dangers, the difficulties, and the consequences of late operation were opposed to Dr. Ripley's views. In support of his own views with regard to the dangers of the operation, Dr. Winters had marshalled a large number of ancient and modern men of foreign countries, some of whom had performed tracheotomy, and some of whom had never done so; some of whom had performed tracheotomy for croup, and some of whom for other causes; some of whom had performed the operation in children, and others who had performed it in adults. As Dr. Ripley understood the question, it was not whether the operation of tracheotomy in general was a difficult or a dangerous surgical procedure, but it was whether tracheotomy in children for croup was a difficult and dangerous operation. So far as tracheotomy generally was concerned, he should be willing to put in a demurrer to the position taken by Dr. Winters, as it was well known that it was neither very difficult nor very dangerous.

The danger in cases of croup consisted, first, in the condition of the child; second, in the necessity for performing the operation within a given length of time. Dr. Winters had considered one danger, and, so far as Dr. Ripley had been able to discover, he had touched upon only one, or at least but very little upon any other, namely, hemorrhage. Dr. Ripley did not understand that hemorrhage was the most common cause of death during the operation of tracheotomy. The operator had to deal with children who were suffering from systemic poisoning, from stenosis of the larynx, often from infiltration of the cellular tissue of the neck, which was sometimes immensely swollen. In order to reach the trachea under these circumstances the surgeon must go down for perhaps two inches, which necessitated a good deal of time and a good deal of care, and these little children were so paralyzed with the poison of diphtheria that, before the surgeon reached the trachea, the patients were liable to die from *syncope*, and not from hemorrhage.

If, when the stenosis was very great, chloroform was administered, the child was liable to die of apnœa; but if chloroform were not administered, as Dr. Jacobi has properly said, the child would die from paralysis of the heart and respiratory muscles incident to struggling.

With reference, then, to tracheotomy being a dangerous operation, he was willing to go with the small majority made up of such gentlemen as Professor Gross, Mr. Holmes, and Professor Billroth, and should feel satisfied if he maintained the position which those men had taken. He thought it was fair to presume that their opinions were based upon an extensive clinical experience.

Dr. Ripley had performed tracheotomy one hundred and ten times, and had seen it performed at least fifty times more. He had also seen nearly every form of complication which could exist, and had seen all sorts of operators make a trial of it. He had assisted several operators at their first operation, and believed that he had been the means of saving several lives by being present at operations performed by inexperienced operators. He had known a large number of deaths to occur upon the table.

He did not say, as had been indicated by the author of the paper, that tracheotomy was the most dangerous of all operations. He simply said that tracheotomy for croup in young children was one of the most dangerous operations in surgery. He also said that his opinion was

supported by Gross, Holmes, and Jacobi. He also was familiar with the opinions of most of the surgeons in this city, and knew that those who operated a great deal considered it as a general rule a very dangerous operation.

With regard to ten deaths occurring upon the table during tracheotomy, the operations were performed by seven men, and four of those were gentlemen of remarkable surgical experience, ability, and coolness. He knew of one death which occurred from puncturing the internal jugular vein, and the patient died from hemorrhage, the operation being performed by one of the best surgeons in New York City.

He also knew of quick operations, of two or three plunges; in one the plunge was into the spinal column, in another the operator plunged into the œsophagus, and in the third the plunge was into the side of the trachea, and the scalpel went completely through it. Dr. Ripley regarded such work as rather reckless surgery. He thought it was sufficiently dangerous when the tissues were carefully dissected down to the trachea, and the trachea was *seen* before it was opened. The trachea was liable to be displaced by an enlarged gland, or other condition, and he regarded it as exceedingly dangerous to endeavor to cut into the trachea by striking it with the scalpel in the median line.

As regarded early operations, Dr. Winters had advocated strongly the performance of the operation early. As Dr. Ripley had often said, the man who operated early would have the greatest success, not for the reasons which Dr. Winters had given, however, but for the reason that unnecessary operations, as a rule, were those which were performed early. He had within the last few months watched ten cases of diphtheritic croup in which it became a question whether or not tracheotomy would be required, and in all the patients had recovered without an operation. As a matter of necessity there was great danger of making a mistake in diagnosis. It was often impossible to differentiate until the cases had been watched for two or three days, but in such cases the patients almost always get well without the operation. It was true that the operation might be demanded for inflammatory stenosis of the larynx, as Dr. Jacobi had said, but those cases were very rare; they would answer very well to the picture which the author of the paper had given as diagnostic of membranous croup. Cases of catarrhal laryngitis were, as a rule, not accompanied by a great amount of difficulty in expiration, but in certain cases there would be difficulty in both inspiration and expiration, and in these cases the patient would get well without the operation. Besides, there was a certain number of cases of diphtheritic croup in which the patients would recover without either remedies or operation. Hence it was that there were so many specifics for croup, because in a certain proportion of cases of croup the patients would recover without any treatment, especially if the air of the room was kept moist with steam.

Concerning the effects of delaying the operation, he had been complimented by Dr. Winters with the statement that his argument was illogical because he had advocated a late operation, and then went on to say that he had been called to operate for croup and found the children dead when he reached the place. Dr. Ripley was unable to see anything specially illogical in the statement which he made, and thought that if the gentlemen who read his paper would follow the course that he there advocated, they would come out all right. With reference to these cases, in one instance the doctor had not seen the patient for a number of hours, and in one case for twelve hours. If Dr. Ripley had advocated anything in his paper, it was *that all such cases should be watched very closely*.

If Dr. Winters' causes of death after late operations were really such, then they must be those which he stated, such as pneumonia and extensive bronchitis. Dr. Ripley thought that if there was any fact in scientific medicine easily demonstrated, it was that stenosis of the larynx, or stenosis of any part of the respiratory organs before the air-vesicles were reached, which was not complete, gave rise, not to congestion of the lungs, but to *anæmia* of the lungs, which can be easily ascertained by physical signs. Broncho-pneumonia, as claimed by both Dr. Jacobi and Dr. Winters, was not found, but anæmia of the lungs and certain areas of collapse which had been produced by plugging up the bronchi leading to these collapsed portions of lung tissue. If that was true, then prolonged stenosis of the larynx did not give rise to congestion of the lungs, and hence delayed operations were not dangerous on account of broncho-pneumonia which might follow. Dr. Ripley then referred to an autopsy recently made by Dr. Maxwell, in a case of diphtheritic croup, in which were found membrane extending downward as far as the third bifurcation of the bronchi, with two or three large areas of collapse, and no broncho-pneumonia whatever. Dr. Ripley then stated, as he had done previously, and he now has the records of about twenty autopsies, that in not a single instance had there been found sufficient pneumonia to produce death. The most common cause of death, whether in the early or late stage, was *bronchial croup*. Trace the bronchi out and it would be found that the membrane extended sometimes as far as the fourth or fifth bifurcation, but before the membrane lined the tubes throughout the child must die of suffocation.

There were also other causes of death, such as nephritis, which killed in quite a number of cases; also respiratory or cardiac paralysis, or both. These were the three principal causes of death after tracheotomy.

Carbonic acid poisoning had no tendency to increase the formation of membrane.

When the child did not have retraction of the chest-walls in respiration he did not perform tracheotomy.

In conclusion he simply wished to impress what he had stated with regard to the causes of death upon the table, namely, that hemorrhage was one of the most infrequent, and further, that he regarded it as eminently proper for an inexperienced man to call to his aid, if possible, an experienced man when the operation was performed.

Dr. Winters, in closing the discussion, remarked, with reference to Dr. Jacobi's criticism, that he had quoted many American writers as well as Professor Gross.

Regarding the entrance of blood into the trachea, there had been a great misconception concerning the performance of tracheotomy. Tracheotomy properly performed was almost bloodless. He had seen the operation performed for the first time very often, and had seen it done better than it was usually executed by specialists, for the reason that the operators usually proceeded with more care, and secondly, that the specialist was not accustomed to watching the disease day by day, was terrified by the appearance of the patient, and thought that preservation of life depended upon making an opening into the trachea quickly. Dr. Winters thought the operation should be performed by the man accustomed to sit by the bedside and watch the progress of the disease, and who therefore knows that it matters not if he complete the operation in one or twenty minutes.

How should tracheotomy be performed in order to be bloodless? After the incision through the integument was made the scalpel should be put aside and not taken up again until the trachea was laid bare. The separation of the tissues might be made with two pairs of forceps, or it could be done readily with the end of a pair of ordinary scissors. If any portion of the fascia could not be torn it could be raised on a director and divided, preferably by a pair of dull scissors, after being carefully inspected. When the operation was performed in this manner care was not required with reference to the entrance of blood into the trachea.

Dr. Jacobi had said that, when blood entered the trachea and the bronchi, it might cause bronchitis and

broncho-pneumonia. Dr. Winters regarded this as the view formerly advocated by Niemeyer in treating of bronchial hemorrhage. and thought that it had been almost entirely exploded; indeed, Niemeyer retracted it before his death. It was not possible for blood to get into the small bronchi, and produce broncho-pneumonia. If a small quantity of blood got into the trachea and was left there, the operation was not completed. The operation was incomplete until every portion of blood had been expelled from the trachea by titillation with a feather or other means.

Dr. Jacobi had also stated that the older writers were opposed to the operation of tracheotomy because it was before the discovery of chloroform, but Dr. Winters thought that the quotations which he had made were sufficient answer to that statement. Billroth had been referred to as opposing the operation, more especially because he had performed it without chloroform. On this point Dr. Winters stated that Billroth had performed the operation only twelve times so far as he had been able to find on record. Concerning chloroform, he had not supposed there was any question concerning the propriety of using it ordinarily in tracheotomy, nor did he suppose there was any marked difference of opinion as to which was preferable, chloroform or ether. Ether produced irritation and congestion of the air-passages sometimes amounting to acute inflammation.

With reference to membranous croup having stages, Dr. Winters did not use the word stages with reference to croup, except as quoted from Sanné, of Paris. He agreed with Dr. Jacobi, that these stages could not be always recognized.

Dr. Jacobi had also alluded to the use of mercury in the cure of croup. That bichloride of mercury was a germicide or an anti-fermentative in the cure of diphtheria Dr. Winters did not believe. It was not possible for bichloride of mercury to be introduced into the blood in sufficient quantity to act in either way. In the first place, it was given in small quantities frequently repeated, and it was rapidly eliminated, and if elimination was interfered with it induced one of two things, either vomiting or purging. Therefore there was not sufficient of the remedy accumulated in the blood to act as either a germicide or an anti-fermentative. Was it possible to get the germicidal effect of the remedy by its internal administration? Positively, no. It had no other action than that of a simple tonic, and its action in the cure of croup was precisely the same as that of iron, a remedy which it would never supersede. As to bichloride of mercury having any influence in producing resolution of the membranous exudate, it had no more action than any other mercurial salt.

With reference to the extension of diphtheria to the bronchi, if diphtheria extended into the trachea and bronchi it almost always did so before the performance of tracheotomy. Dr. Winters did not think that a post-mortem record could be found which would tend to show that the membranous exudation of diphtheria appeared in the trachea and bronchi *after* the performance of tracheotomy, when it did not exist previous to the operation. The extension of the disease was by its propagation downward, and in those cases in which it was found death occurred within a comparatively short period, before sufficient time had elapsed for the disease to extend there after the performance of the operation.

As regarded Dr. Smith's statement concerning the necessity of assistance to one inexperienced in the performance of tracheotomy, Dr. Winters could not feel that it was essential, and Dr. Smith himself had admitted that under certain circumstances in the country it was not necessary. What can be done in the country can be done in the city.

Tubage of the larynx dates from Hippocrates, although Dr. Winters was not able to state that it was then applied. It had been practised in France a great deal, but it was entirely out of use, and no one in France, experienced in the treatment of membranous croup, would think, at the present time, of tubing the larynx.

Dr. Ripley had stated that many of the gentlemen whom he had quoted had never performed tracheotomy. In answer to this, Dr. Winters said he had quoted one, possibly two, gentlemen who had never performed tracheotomy, but almost all the quotations had been made from men who had performed the operation hundreds of times, and almost all of them had performed the operation in diphtheritic croup. In regard to Dr. Gross, his book, at least, did not show that he had ever performed tracheotomy for diphtheritic croup. Dr. Ripley apparently confounded the dangers of the *operation* with the dangers of the *disease*, and said that the conditions which render the operation needful made it dangerous. Dr. Winters said that the operation itself, performed with care, was not dangerous. Any man who was competent to practise medicine could, in a time of emergency, without a single surgical instrument, perform tracheotomy in diphtheritic croup in a young child with a short, thick, swollen neck, with absolutely no danger to the patient. Such a man generally has a knife with which he can make an incision through the integument, and with an ordinary pair of scissors he can work his way to the trachea with the loss of less than a drachm of blood. When the trachea has been clearly exposed he can open it with a penknife, and he can then hold the trachea open with two bent pins and a tape going round the neck, as one surgeon did, and saved the child's life. Any man who was prepared to undertake tracheotomy in that way was far superior to the specialist who used a large array of instruments, and with one incision laid bare the trachea.

Concerning deaths upon the table, Dr. Ripley still insisted upon that occurrence as being an indication of the danger of the operaton. When death occurred upon the operating-table it was not due to the operation, unless performed with haste and carelessness. It was always due to either carelessness or late performance of the operation. Again, Dr. Ripley said that by resorting to the operation early we should operate in cases where it was not necessary. To that point Dr. Winters had alluded in his paper, and it was there that the question of diagnosis was introduced. That was the reason why the operation should be in the hands of the general practitioner, because he was a better diagnostician in croup than the surgeon, who was not accustomed to watch the progress of the disease. A man who had watched many cases of croup could be very sure of his diagnosis.

With reference to catarrhal laryngitis, spasm, and œdema, Dr. Winters impressed the fact spoken of by Dr. Ripley, that where expiration was free there was no membrane in the larynx; but the moment you have obstruction, prolonged audible expiration, voice suppressed to a whisper, there was membrane in the larynx; nothing else would produce that symptom.

Regarding prolonged obstruction to inspiration, Dr. Ripley had said that it did not produce congestion of the lungs. That view would not bear close examination. Any one familiar with the physiology of respiration knew that as soon as interference with the inspiratory act occurred embarrassment of the pulmonary circulation followed, and with this damming back of blood upon the heart, a final result was a weakened heart-force, delayed circulation, diminished aspiration force, and passive congestion of the pulmonary vessels, and to this there was no exception in protracted stenosis of the larynx. No man could prove by autopsies upon record that it did not occur in every case of protracted croup where tracheotomy had *not* been performed. Dr. Winters had examined the records of hundreds of cases, and had found passive congestion, accumulation of mucus in the bronchi, pulmonary collapse, and when the condition had existed a little longer he had found congestion of the lungs and pulmonary œdema, all the changes which exist in a case of ordinary broncho-pneumonia. Dr. Ripley had also spoken of the analogy existing between asthma and

croup so far as the lungs were concerned. Dr. Winters said there was no analogy whatever existing between the two conditions.

Dr. L. Elsberg wished to say a word in defence of the memory of his old teacher, Professor Gross, who had taught that, although the general operation of tracheotomy was perfectly simple and not difficult to perform, there were circumstances which rendered it one of the most serious and formidable operations in surgery. It was not true, as Dr. Winters had stated, that Professor Gross had not performed the operation for diphtheritic croup. Dr. Elsberg heartily sympathized with the general drift of Dr. Winters' paper, and said that he had previously placed himself upon record with the statement that any medical man worthy of the name of physician should be able to perform tracheotomy.

Dr. Winters remarked that no one would bow lower or more reverently than he to the memory of the late Professor Gross, but he believed it to be eminently proper to criticise some of the statements which this justly distinguished author had made in his work on "Foreign Bodies in the Air-passages," and, so far as his book was concerned, there did not exist in it any evidence that Professor Gross had ever performed tracheotomy for diphtheritic croup.

The Academy then adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, November 12, 1884.

R. E. Van Gieson, M.D., Vice-President, in the Chair.

Dr. R. W. Wilcox presented a specimen of

CANCER OF THE BREAST—SCIRRHOUS MAMMA—

which he removed October 16, 1884.

Mrs. W——, fifty years of age, with excellent family history, and the mother of three children, had had pain in the left side of her chest for the last three years. As the pain was increased on deep inspiration she inferred that it was due to some respiratory or rheumatic affection, and applied a plaster. When she removed this plaster she noticed a small lump, about the size of the end of her index-finger, in the left breast, below the nipple. Within the next six months she began to have stinging, itching, and drawing pains at intervals, but more especially during the few days previous to the menstrual period. During the last year retraction of the nipple has been noticed. The pain gradually increased until it became constant and severe, interrupting the sleep. Had no symptoms during lactation. Has not yet reached the menopause. Axillary glands not affected.

The report of the examination of the specimen, by Dr. H. C. Coe, is as follows:

Gross appearance.—Specimen includes the entire mamma, which is of nearly normal appearance, though the nipple is small, fixed, and slightly retracted. Below the nipple is a hard mass about the size of a hazel-nut. On section the gland is found to be overgrown by adipose tissue. In the centre of the mass, just beneath the nipple, is a firm, hard, fibrous mass, which is attached to and involves the base of the nipple. Strong bands of fibrous tissue extend from the periphery of the gland to this nodule.

Microscopic examination.—The central mass is found to be largely made up of fibrous tissue. Some sections show an entire absence of cellular elements, others are filled with scattered groups of epithelial cells, having a distinct alveolar arrangement. No signs of degenerative changes throughout the growth.

Dr. Garrish asked if any member had known a patient to live ten years after removal of a breast for scirrhus. The late Dr. Valentine Mott had made the assertion that no patient could live more than six years after removal of the breast for cancer.

Dr. Wyeth referred to one case in which the patient had lived seven years after removal of the cancerous breast. In his case there had been a number of operations.

Dr Carpenter referred to a case in which, eight years ago, he assisted in removing a tumor of the breast, which microscopical examination, made by Dr. Delafield and himself, determined to be cancer. There had been no recurrence of the disease.

Dr. George A. Dixon presented specimens of

PACHYMENINGITIS INTERNA HEMORRHAGICA, WITH CEREBRAL HEMORRHAGE,

accompanied by the following history:

J. C——, thirty-three years of age; Ireland; fireman; admitted to Charity Hospital, October 27, 1884. Family history: Negative; previous history: Patient has been a hard drinker for some years, his work has been fireman on board ship. Gives no history of any trouble up to six months ago. Then, while at Madagascar, was attacked with what he called "chills and fever." Would have a chill which was quite severe, followed by headache and fever, lasting until evening; these symptoms returned each day. He complains of some epigastric pain, and has vomited some blood. Had a small hard sore on penis three months ago, followed by an eruption. Had gonorrhœa some years ago, and has discharge now.

Present condition, October 27, 1884.—Complains of above symptoms and describes headache as burning in character and occurring over front part of head. Has a pain in his back and also in epigastric region. Appetite poor; bowels regular; has no trouble in passing urine. Walks around ward.

October 30th.—Patient is rational and seems to be doing fairly well. Physical examination reveals nothing except slight enlargement of liver.

November 3d.—To-day I saw patient for the first time, having just come on the service. Patient was asleep, was easily aroused, but was drowsy. His pupils were a very little enlarged equally. Could shut both eyes tightly, and either separately. Mouth could be well drawn to either side; tongue was protruded straight. Complained of soreness on percussion over skull; said that on October 27, 1884, he had fallen down stairs, striking on left side of head; no fracture could be detected. The grasp of the right hand was weaker than that of the left. Got out of bed and walked without difficulty, but had hemiplegic gait in right leg; stood well with feet together when his eyes were shut, also on left foot, but could not stand on right foot. The right patellar tendon reflex was exaggerated, there was no ankle clonus, and the cremasteric reflexes seemed equal on the two sides. There was slight loss of sensation over entire right side. There was no trouble with either bladder or rectum. Speech was slow and drawling; patient seemed to understand questions perfectly.

Diagnosis.—Either meningeal hemorrhage, syphilitic tumor, cerebral hemorrhage, or pachymeningitis hemorrhagica.

Treatment.—Potass. iodid., grs. x. ter. in die., to be rapidly increased. Hydrarg. biniod., gr. $\frac{1}{24}$ ter. in die.

November 5th.—Patient sleeps most of the time and is more stupid, was delirious last night; has difficulty in passing urine.

November 7th.—Has had muttering delirium constantly since last note, continually says, "My head is broken." Could not be aroused this morning, and died at 3.45 P.M., just after vomiting a quantity of yellowish fluid.

Autopsy, by Dr. Banks, house-physician, twenty-four hours after death. Heart, normal, weighs twelve and one-half ounces; liver, fatty and enlarged, sixty-nine ounces; spleen, enlarged and soft, six and one-half ounces; kidneys, normal, weigh twelve ounces; lungs, hypostatic congestion at posterior border, otherwise normal, fifty-seven ounces. On removing scalp a contused

spot was seen over left parietal bone. There was no fracture of skull. Brain was carefully removed and sent to me. The brain is well developed, there is slight flattening over left hemisphere. The inner surface of the dura mater, covering the upper surface of the left hemisphere, is covered by a false membrane, in the meshes of which are extensive hemorrhages. The measurements of this false membrane are, antero-posteriorly, six and one-half inches; laterally, two and one-half inches, and one-quarter of an inch in depth. There are punctate hemorrhages in the meshes of the pia mater underneath this area, and around are pigmentary spots. This false membrane covers the posterior aspect of the first and second frontal convolutions in front, to the corner of occipital lobe behind, and covering upper two-thirds of ascending frontal and parietal convolutions, also parietal lobe. There is a recent hemorrhage in the left hemisphere, beneath superior and inferior parietal convolutions, measuring, antero-posteriorly, one inch; laterally, one and one-fourth inch, the cavity of which would hold an English walnut. This hemorrhage is situated in the internal capsule. The arteries at the base were normal; no miliary aneurisms could be detected.

The severe pain in the head, the history of alcoholism, the fall ten days before death, and the stupor with slight paresis on right side, were points to my mind in favor of one of the four conditions I have named, with the probability that it was a meningeal hemorrhage, pachymeningitis, or possibly a syphilitic tumor occurring early in disease. Unfortunately no temperature was taken, so that cerebral hemorrhage could not be excluded when I first saw him. The points of interest are: the age of patient, the recency of the syphilitic attack, the absence of any well-marked head symptoms until three days before death, the stupor occurring then and increasing rapidly, patient becoming comatose in afternoon, and the appearance of the hæmatoma—the process having been going on for years probably. It seems to me that the cerebral hemorrhage occurred only three days before death, at the time the patient became comatose, and this apoplexy was the direct cause of death. It is very unfortunate that I could find no friends of deceased to obtain a good previous history. The hemorrhage was probably due to miliary aneurisms, although none were found, and the arteries at the base were normal, as well also the kidneys and heart.

Dr. Seguin remarked that the case was interesting on account of the slight symptoms connected with the pachymeningitis, which was in accord with what he had seen in two cases in which the symptom was mainly headache of different forms—not burning pain, but severe headache.

In the first case the patient became gradually comatose without paralytic manifestations, and the autopsy showed a thick hemorrhagic clot over both hemispheres.

In the second case the first symptom was headache, not localized, but severe pain, and then there occurred rather suddenly clonic spasms in the face and hand of one side, and also paresis of that side, after which the patient became gradually more and more comatose, and died without paralysis.

In both cases the pupils were contracted. In the second case the quantity of blood within the cranial cavity was so enormous that the hemispheres were concave at the autopsy, and when the dura was pricked the blood spurted out to a great distance; yet there was no marked paresis. There was no diagnosis in either case.

With reference to miliary aneurisms, it is necessary in searching for them to sacrifice the specimen. The brain should be placed in water and allowed to decompose, when the blood-vessels can be brushed out and the aneurisms easily detected.

Dr. Peabody remarked that the case was further interesting in the comparative youth of the patient. It was rather unusual for cerebral hemorrhage to occur at this age, if the patient had normal kidneys and heart. It had occurred to him several times to find cerebral hemorrhage in young persons, and in one case the patient was a boy nineteen years of age. In that instance, however, there was a congenital narrowing of the aorta.

With reference to pachymeningitis hemorrhagica, he had observed that the disease may exist without producing any symptoms whatever until a large hemorrhage takes place. He had frequently found the lesion of pachymeningitis hemorrhagica to the extent of the formation of numerous layers up to fully formed connective tissue, in which repeated small hemorrhages had occurred, as evidenced by numerous collections of blood pigment, and in which no symptoms whatever had been given during the life of the patient.

It had also occurred to him to find cases in which the hemorrhage had been large, and the symptoms had been very pronounced, but they were merely the symptoms of pressure upon the surface of the brain.

Dr. Van Santvoord thought the traumatism in Dr. Dixon's case should have a little more stress laid upon it than it had received. He remembered, when an interne in Bellevue Hospital, that quite a large number of cases of intoxication were admitted, presenting no symptoms except semi-stupor; but the patients finally became comatose and died without marked paresis or paralysis. At the autopsy there was found fracture at the base of the skull, but the fatal lesion seemed to be surface hemorrhage, adherent or not to the dura mater. He remembered one case in particular, that of a woman, who fell and struck her head against a hard resisting substance. At the autopsy there was found extensive pachymeningitis, with quite a recent hemorrhage under a layer of membrane on both sides of the falx. In that case it was a question whether the condition dated from the fall or whether the hemorrhage only was excited by the fall. In Dr. Dixon's specimen the pachymeningitis presented the appearance of being of recent occurrence.

Dr. Dixon said a point against the last statement made by Dr. Van Santvoord was the fact that there was a good deal of pigment around the hemorrhage, which must have been of old date, and there were several layers into which it was evident that hemorrhage had been taking place from time to time.

Dr. Seguin asked Dr. Peabody if he had been able to make sure that headache was not present in his cases.

Dr. Peabody said he was not entirely sure of the absence of headache, for the reason that the cases were all hospital cases. But he was able to say that the patients did not complain of head symptoms sufficient to attract the attention of the house staff.

Dr. Dixon remarked that in his case the man complained for some months previous to admission of only chilly feelings followed by headache, disappearing in the evening, and recurring on the following morning, and when he entered the hospital he described his headache as being of a burning character, and perhaps a little more marked over the frontal region than elsewhere.

Dr. John A. Wyeth presented

A GOITRE REMOVED BY OPERATION,

with the following history: Theresa H——, thirty-six years of age, housewife, a native of Germany, had had a goitre since she was ten years of age, but it never troubled her until three years ago, when it began to increase in size, and gave rise to difficulty in swallowing and breathing. The goitre had grown principally downward, across, and to the right, until it involved the whole anterior surface of the neck. She never had exophthalmos or palpitation of the heart. During the last three years she had had cough, which caused her much pain in the goitre and in the head. There was no family history of goitre, and the patient's previous health had been good.

On admission a large goitre was seen, extending from one side of the neck to the other, and extending behind either sterno-mastoid muscle. The narrowest part appeared in the median line, where it extended from the

lower part of the thyroid cartilage to behind the sternum. The lower border dipped down behind the clavicle and sternum. The tumor was hard, no fluctuation, and measured eight inches across, three and a half inches vertically. There was some visible pulsation of vessels over tumor. The patient's general condition was good. The patient breathed with great difficulty. The laryngoscope showed vocal cords close to median line.

October 23d.—The patient has stridulous, painful cough, and breathes with much dyspnœa.

October 26th.—Operation under ether. Took the anæsthetic badly. A crucial incision was made over the tumor, followed by careful dissection. It was found necessary to extend the incision to the left, dividing the external and anterior jugular veins and the whole of the sterno-mastoid muscle; the right sterno-mastoid muscle was only partially cut.

On the left side the internal jugular vein crossed the carotid artery to the inner side and passed high over the side of the tumor and was closely adherent to it; it was ligated above and below the tumor. The trachea was pushed abruptly to the left by the tumor. About three-fourths of an inch below the larynx, on the posterior aspect of the tumor, it was calcified and tightly adherent to the trachea. Very little blood was lost during the operation, which lasted four and one-half hours. It was then found impossible to separate the tumor from the trachea. An elastic ligature was passed about the loosened part of the tumor and the wound left open. The patient breathed badly throughout the operation, but her pulse remained good. After the operation the dyspnœa increased, and one and one-half hour later the patient died, apparently of œdema of the lungs. She was stimulated freely, and her pulse did not fail until twenty minutes before death. The tumor was removed post-mortem, and the part ligated off proved to be less than one-half. The lower and back parts were hard and cartilaginous, and contained deposits of calcific material which looked as if cysts had undergone calcific degeneration. The vessels on the right side were not disturbed, but on the left side the carotid was exposed for four inches with the pneumogastric nerve by its side uninjured. The internal jugular was ligated above and below the tumor. Nearly all the vascular connections of the tumor had been ligated.

In two other cases, already reported to the Society, Dr. Wyeth had removed the thyroid gland successfully.

Dr. Wendt asked Dr. Wyeth if in his successful cases he removed the thyroid gland completely.

Dr. Wyeth replied that the disease occupied only one-half of the thyroid body, which was removed with the isthmus up to its junction on the opposite side.

Dr. Wendt said the reason he asked was because Bruns, of Tübingen, had recently again directed attention to the fact that when the thyroid body had been completely removed the patient developed a peculiar characteristic cachectic condition, and had often died at periods varying in length from six months to several years after the operation. This observer had concluded that complete removal of the thyroid body was therefore unjustifiable, whether the gland was diseased or not.

Dr. Wyeth remarked that he did not wish to be understood as favoring removal of the thyroid body by surgical operation.

Dr. Howe thought that the application of so many ligatures could be avoided by adopting a plan recommended by Bluxom, of Charing-Cross Hospital, London, who makes an incision in the median line, divides the tumor into two equal parts, then ligates one-fourth of the tumor, tying it on each side, and cuts the mass included in that ligature completely out without special hemorrhage. He reports three cases of recovery without the development of any peculiar cachexia.

Dr. Wyeth said that in his last case the tumor was so vascular that had he split the tumor with a ligature the woman would have died of hemorrhage at once.

Army News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from November 30 to December 6, 1884.

Irwin, B. J. D., Major and Surgeon. Granted one month's leave of absence. S. O. 112, Department of Arizona, November 28, 1884.

O'Reilly, Robert M., Captain and Assistant Surgeon. Assigned to duty as Attending Surgeon, Washington City, D. C., to date from October 20, 1884. S. O. 284, A. G. O., December 4, 1884.

Barrows, C. C., First Lieutenant and Assistant Surgeon. In addition to other duties, to take charge of the office of Medical Director, Department of Arizona, during absence of Surgeon B. J. D. Irwin. S. O. 112, Department of Arizona, November 28, 1884.

Kneedler, William L., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort A. Lincoln, Dakota Territory, and ordered to Camp Poplar River, Montana Territory. S. O 140, Department of Dakota, November 25, 1884.

Pilcher, James E., First Lieutenant and Assistant Surgeon. To be relieved from duty at Camp Poplar River, Montana Territory, and ordered to Fort A. Lincoln, Dakota Territory. S. O. 140, Department of Dakota, November 25, 1884.

McCaw, W. D., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Wingate, New Mexico, and ordered to Fort Lyon, Colorado. S. O. 228, Department of Missouri, November 26, 1884.

Gray, Charles C., Major and Surgeon. (Retired.) Died at Geneva, New York, November 26, 1884.

Medical Items.

Contagious Diseases—Weekly Statement.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending December 6, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
November 29, 1884.....	0	42	52	2	90	55	0	0
December 6, 1884.....	0	32	67	8	155	75	0	0
Deaths.								
November 29, 1884.....	0	15	14	2	23	26	0	0
December 6, 1884.....	0	10	13	8	22	43	0	0

A French Cure for Corns.—Saturate the stockings at the point covering the corns in a solution of phosphorus in olive oil (one part to three hundred); wear them as usual, and in fifteen or twenty days, it is claimed, the corns will have disappeared.

The Oldest Physician in the State.—Dr. Thompson Burton writes us that Dr. Joseph Braman, of Braman's Corners, Schenectady County, is the oldest Mason (and probably the oldest physician) in the State. He was ninety-one years old on August 30, 1884.

Hygiene and Bacteriology.—A department of hygiene and bacteriology has been opened in connection with the chemical laboratory of Professor Fresenius at Wiesbaden. Dr. F. Hueppe, who has done much work under Dr. Koch at Berlin, has been appointed to the charge of this department.

The Medical Record

A Weekly Journal of Medicine and Surgery

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Original Articles.

DO WE PRODUCE AVOIDABLE PAIN AND COMPLICATIONS IN THE DIAGNOSIS AND TREATMENT OF STRICTURE CONSECUTIVE TO GONORRHŒAL URETHRITIS?

BY FANEUIL D. WEISSE, M.D.,

PROFESSOR OF PRACTICAL AND SURGICAL ANATOMY, MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK; VISITING SURGEON, WORKHOUSE AND ALMSHOUSE HOSPITAL, NEW YORK CITY.

THE above question is put and discussed not in the spirit of idle criticism or antagonism to orthodox practice, but with the hope that both the question and the argument may be weighed in the light of individual experience. The motive of the article is to present a strong conviction held that the present use of instruments in the urethra in the diagnosis and treatment of stricture consecutive to gonorrhœal urethritis does give needless immediate pain, and does produce avoidable local and constitutional complications. It is desired to suggest a basis for the collection of past experience and future observations, which may lead to the accumulation of positive evidence that will modify our use of instruments in the urethra in these cases. Such modification will *diminish suffering* and give more precision to our instrumental procedures for the relief of our patients.

First.—*The locality of stricture of the urethra consecutive to gonorrhœal urethritis does not warrant the introduction of instruments interiorly to the triangular ligament, or through the membranous and prostatic portions of the urethra into the bladder.*

All authorities are agreed that the prostatic portion of the urethra is never the seat of stricture from any cause. The membranous portion is acknowleged as the locality where traumatic stricture most frequently occurs. Special statistics are wanting as to the occurrence of stricture consecutive to gonorrhœal urethritis in the membranous portion.

Writers upon the subject of stricture of the urethra confirm the localization of this form of stricture exteriorly to the triangular ligament, at times by the direct statement, at others by implication, but conclusively so in the detailed recital of cases, when accurate measurements are given. Dr. Fessenden N. Otis ("Stricture of the Male Urethra," p. 134) defines stricture consecutive to gonorrhœal urethritis, as follows: "Stricture in the sense of an abnormal contraction of the urethral calibre, at some point at or between the meatus urinarius and the bulbo-membranous junction." At this "junction," it will be remembered, is the triangular ligament.

The most recent observations which have been made in locating stricture of the urethra from all causes are those of Otis and Gross; they were made upon living patients, with the metal bougie à boule.

Otis (op. cit., p. 96) located 258 strictures, from all causes, as follows: 52 in first ¼ inch within the meatus, 63 from ¼ to 1¼ inches from the meatus, 48 from 1¼ to 2¼ inches, 48 from 2¼ to 3¼ inches, 19 from 3¼ to 4¼ inches, 14 from 4¼ to 5¼ inches, 8 from 5¼ to 6¼ inches, 6 from 6¼ to 7¼ inches. The 52 cases in the first one-quarter of an inch within the meatus might be discarded as conditions of congenitally small meati.

Professor S. W. Gross, M.D. ("Diseases of the Urinary Organs," p. 454) located 173 strictures, from all causes, with the following result: 49, or 28.32 per cent., were within 2½ inches from the meatus; 48, or 27.74 per cent., were between 2½ inches from the meatus and 1 inch from the triangular ligament; 76, or 43.93 per cent., were between 1 inch in front and ¾ of an inch behind the triangular ligament.

Combining the two series of observations (less Otis' 52 cases within one-fourth of an inch of the meatus) we obtain the following localization of 379 strictures of the urethra in living patients, with *living histories:* 289, or 76.24 per cent., were between 1 inch in front of the triangular ligament and the meatus; 90, or 23.75 per cent., were between 1 inch in front of and ¾ of an inch behind the triangular ligament. If the last 90 cases had been carefully recorded as to their *locale*, so as to determine positively whether or not they were exteriorly to the triangular ligament, a very large number of them would have been located in the one inch in front of the triangular ligament. It would be safe to say that 343, *or* 90.24 *per cent., of the* 379 *strictures were located exteriorly to the triangular ligament.*

It is much to be regretted that in both Otis' and Gross' cases the causes of the strictures were not given. The weight of evidence from daily practice will fully endorse, and even go further than, Gross in his opinion (op. cit., p. 452): "Judging from my own experience, I am convinced that at least 90 per cent. of all cases, not traumatic, are the effect of gonorrhœa." Upon this basis we would not be straining a point to assume that 303, or 90.24 per cent., *of the above* 349 *strictures located exteriorly to the triangular ligament were consecutive to gonorrhœal urethritis.*

With these data in mind, and a case of suspected stricture with a history of antecedent gonorrhœal urethritis, are we warranted in passing an instrument interiorly to the triangular ligament for the diagnosis of the same? With a stricture located by instrumental examination exteriorly to the triangular ligament, why should an instrument be passed interiorly to the ligament?

I hold that all cases of stricture consecutive to gonorrhœal urethritis are located exteriorly to the triangular ligament. When the urethritis passes interiorly to the triangular ligament it may produce an epididymitis, by continuous progress into the ejaculatory ducts, etc., or an attack of cystitis by progressing to the bladder, but it does not produce stricture of the membranous portion of the urethra.

Second.—*The instruments in general use for the diagnosis and treatment of stricture of the urethra consecutive to gonorrhœal urethritis are calculated to produce needless pain and avoidable local and constitutional complications.*

The instruments in general use in the treatment of this variety of stricture are sounds and bougies; while the metal bougie à boule, urethrometers, urethral divulsors, urethral dilators, and urethrotomes are in the hands of specialists and a limited number of general practitioners.

Authors of surgical text-books, writers, as specialists, on male genito urinary diseases, professors of surgery in their didactic and clinical lectures, all concur in advising the use of sounds and bougies in the diagnosis and treatment of all cases of stricture of the urethra (making no exception for strictures consecutive to gonorrhœal urethritis). They convey the idea, if they do not say so in so many words, and practise it at their clinics, that a patient

is not examined until the sound or bougie has reached the bladder.

The history of the *armamentarium* for the diagnosis and treatment of stricture of the urethra bears evidence of a departure, here and there, from the use of the time-honored sound and bougie. They are, however, only isolated instances of a conservative appreciation of the conditions to be treated, which have not made sufficient impression upon the general profession to lead to their adoption or to any modification of the prevailing methods of practice.

After careful measurements of the sounds in general use, as made by our leading instrument makers (for their circumference Dr. C. H. Thomas' "Adaptable metric gauge" was used), the following appears:

The average length of a sound is eight and a half inches from the handle to the tip; its straight portion varies from six to seven inches, its curve from one and a half to two and a half inches; the circumference of the straight portion is uniform throughout and represents the full size of the instrument; the circumference of the curved portion diminishes from the end of the straight portion to the tip of the instrument, varying in the different instruments. In a few exceptional instances, the special make of the sound is such, that the circumference of the straight portion is continued into the curve to within an inch of the tip.

From careful measurements of flexible bougies of all kinds, French and English, they were found as follows: They vary in length from ten and one-fourth to thirteen inches; they have a uniform circumference, the full size of the bougie, to within three inches of the tip; for their terminal three inches they diminish in circumference very much, to expand again in the bulbous and olive-tipped varieties.

From the shape and length of the above instruments, as thus carefully determined, it will be seen that the curve of the one and the length of both do not adapt them for treatment of the six inches of the urethral canal exteriorly to the triangular ligament. When directed to be used it implies their passage into the bladder.

The sensations of a patient when one of these instruments is passed into the bladder are:

1. When a full-size sound or bougie is inserted, an excessively painful distention of the meatus, which is unnecessarily prolonged, because the circumference of the sound or bougie increases from the tip to the handle end of the instrument; and for six inches of the sound (straight portion) and at least nine inches of the bougie the circumference is uniform and represents the full size of the instrument.

2. Pain is always produced in passing an instrument through the triangular ligament; and a painful sense of fulness is felt while the membranous portion of the urethra is occupied by the instrument.

3. As the instrument passes through the prostatic portion of the canal over the sinus pocularis or utriculus, containing the orifices of the ejaculatory ducts, a markedly unpleasant, reflex, systemic impression is produced, which is augmented by the entrance of the instrument into the bladder.

Professor Gross (op. cit., p. 489) says: "It is well known that patients, especially such as are very nervous and irritable, occasionally suffer most violently from the most trifling operations upon the urinary organs, the mere passage of a bougie, sound, or catheter [presumably passed into the bladder][1] inducing violent rigors, excessive prostration, and other symptoms. Indeed, a large number of cases are upon record in which death was produced by this cause, even when there was no severe disease; and there are few practitioners of any experience in this branch of surgery who have not witnessed the distress, local and constitutional, which healthy persons often suffer from the attempt to pass an instrument into the bladder."

Another authority (Van Buren and Keyes, "Genito-Urinary Diseases," etc., p. 150) says: "The mischief to be feared from the employment of large sounds with force is the production of epididymitis, a common result of violence to the urethra [prostatic portion],[1] and a complication, which suspends treatment and confines the patient for several days or, it may be, weeks." Further on the same authority says: "In rare instances epididymitis may come on in spite of care."

Add to this well-known effect of the use of instruments passed into the bladder the reflection made by the last-named authorities upon epididymitis (p. 416): "One particularly interesting feature of the disease is the fact, mainly brought out of late years by Gosselin, that the chronic induration so often left behind in the epididymis by inflammation sometimes blocks up the tubes sufficiently to prevent the passage of the spermatic elements, thus entailing temporary and sometimes permanent sterility, without an accompanying loss of sexual power." Further on (p. 422) occurs the following, in speaking of this sterile condition of the patient after double epididymitis: "He ejaculates semen resembling the healthy fluid in quantity, smell, and color, only it contains no spermatozoa, and consequently he is sterile."

My own experience furnishes two cases where I examined the ejaculated fluid of patients, who had previously had attacks of epididymitis (double), where no spermatozoa could be found. In one of the cases the right epididymitis was consecutive to the gonorrhœal urethritis, while the left epididymitis was the result of the use of instruments (sounds) passed into the bladder for the treatment of a stricture consecutive to the gonorrhœal urethritis; *the stricture was located exteriorly to the triangular ligament—3¼ inches from the meatus.*

Why incur all the above risks by passing instruments interiorly to the triangular ligament when the nature of the case does not call for it?

I hold that all instruments designed to be passed into the bladder are not to be used in the diagnosis and treatment of stricture of the urethra consecutive to gonorrhœal urethritis, for the reason that I believe their passage interiorly to the triangular ligament is what produces all the above "local and constitutional distress."

For the past three years I have not passed an instrument interiorly to the triangular ligament for the diagnosis or treatment of this variety of stricture. I believe the reason that I have not had any "local and constitutional distress," from the use of instruments for diagnosis and dilatation of this form of stricture, has been because my instrumental procedures were limited to the urethral canal exteriorly to the triangular ligament.

Third.—*All instruments used in the diagnosis and treatment of stricture of the urethra consecutive to gonorrhœal urethritis should be so made as to meet the following requirements: simplicity of construction, compatible with the needs to be fulfilled; length such that they cannot be passed interiorly to the triangular ligament; a variation of circumference such as to give the least possible continuance of pain from distention of the meatus; ruled so as to locate, measure, and treat with immediate precision the stricture or strictures present.*

I would present to the profession the following perfected instruments, made for me by Stohlmann, Pfarre & Co., which have been devised to fulfil the above requirements of instruments for the diagnosis and treatment (by dilatation) of stricture of the urethra consecutive to gonorrhœal urethritis.

A set of metal bougies à boule with non-flexible, ruled staffs (Fig. 1).—These are Otis' metal bougie à boule with a non-flexible, ruled staff, and with a bulb at either end—giving two sizes to the one instrument. Its length is adapted for examination of the urethral canal exteriorly

[1] Words in brackets are added.

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to the triangular ligament—it is six and one-quarter inches from the apex of one bulb to the base of the other. The *bulbs* are scaled from 14 to 37 of the French scale. The *staff*, smaller than the bulbs, has two flattened sides, which are ruled in one-quarter of an inch spaces, so that as an obstruction is met with the distance of its exterior face from the meatus can be read off. Then selecting one of the bougies, the bulb of which will go through the strictured point tightly, pass it beyond the stricture, and on attempting to withdraw the same the base of the bulb will be arrested at the interior face of the stricture, when the distance of the latter from the meatus may in turn be read off. The difference of the distances from the meatus to the exterior and interior faces of the stricture will be the length of the strictured portion.

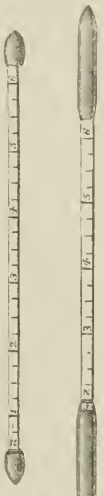

Fig. 1. Fig. 2.

A set of urethral sounds with ruled staffs (Fig. 2).—These instruments have a sound portion at either end—two sizes to one instrument—and an intervening staff portion. A *sound portion* is two inches in length; the middle, for an inch, presents the full circumference or size of the sound in millimetres (French scale); the ends (for half an inch each) taper through several sizes. The *staff portion* has much less circumference than the sound portions, and it is four and a quarter inches in length; it is flattened on two sides (one for each of the end sounds), which are ruled in inches, with the quarter-inch divisions). The length of instrument introduced into the urethra is six and one-quarter inches from the tip of one sound portion to the base of the other.

A given stricture located by the bougies à boule, the proper sized urethral sound is selected and passed, by the ruling on the staff, so as to bring the centre of the sound portion exactly at the strictured portion of the canal.

In using these instruments, the length of the urethral canal exteriorly to the triangular ligament will be found to vary from four and three-quarters to six and one-quarter inches. A little experience will enable one to recognize when the triangular ligament is reached, as it imparts to the finger, when tapping the end of the bougie à boule or urethral sound protruding from the meatus, a peculiar sensation of elasticity, not given by the exterior face of a stricture.

In closing I would suggest:

First.—That, in locating a stricture of the urethra, we determine as to whether it is exteriorly or interiorly to the triangular ligament.

Second.—That, in describing a case of stricture of the urethra, we discard all terms heretofore used in locating the same, and specifically state its relation to the triangular ligament exteriorly or interiorly. The exact distance of the same from the meatus should be stated.

Third.—That all members of the profession contribute their experience toward the accumulation of statistics, which may definitely settle the location of stricture of the urethra consecutive to gonorrhœal urethritis.

Dropping Fluids into the Eye.- The inner corner of the eye is first cleaned from all impurities, and then thoroughly dried. While the child is in the recumbent position, the eye is kept closed. One or two drops of the fluid indicated in the case are then dropped into the corner. When the child opens the lid, the drops flow slowly into the eye. Should the child be asleep, or not at once open the eye, the operator needs but slightly to separate the eyelids, when the drops will immediately enter.—*Medical and Surgical Reporter.*

ON THE NECESSITY OF PROVIDING FOR THE BETTER EDUCATION OF CHILDREN WITH DEFECTIVE HEARING IN THE PUBLIC SCHOOLS.[1]

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The purpose of this paper is to enlist an interest in our public school systems in so far as concerns the needs of pupils whose hearing disabilities prevent their advancement along with good hearing scholars, since it is believed that this matter does not receive the attention its importance demands.

The varieties of deafness.—The defective children believed to be greatly neglected in regard to their education may, for convenience in this connection, be arranged into three classes, namely:

1. Children defective in one or both ears, and requiring close proximity and distinct utterance when taught. Of these, deafness in both ears requires seating on front row of benches, but when only one ear is affected the normal ear must be toward the teacher's desk.

2. Children very deaf, who cannot distinguish ordinary conversation in either ear when more than a few inches from the speaker or unless the conversation tube, otacoustic fan, or other aid to hearing be employed.

3. The totally deaf, in whom the auditory apparatus of the middle ear cannot be made available. This class admits of division into two subdivisions, viz.: *a*, those having learned to talk previous to losing their hearing, and *b*, those born too deaf to ever have naturally acquired speech, commonly known as congenital deaf-mutes.

Deafness in the schools from a physician's point of view.—In considering the relations of all classes of deaf pupils with both the public day-schools and deaf-mute schools from the physician's point of view, it is believed that the extent and importance of the subject may be more fully realized than in any other way, since where professional advice is required opportunity is allowed for thorough examination of the hearing organs, both as regards their physical condition and acoustic functions. A very considerable experience, including observations on a large number of specially interesting cases among school children of the poorer class, seen in hospital practice, led the writer to believe that great injustice was being done in permitting children to struggle for an education under the disadvantages arising from deafness without the aid of methods which experience had shown to be advantageous in such cases; he therefore concluded to make some efforts in their behalf, and in 1877 the matter was brought to the notice of the Board of Education of New York.

Its consideration by the New York Board of Education in 1877.—The Board referred the matter to the Committee on Teachers, and in explaining the matter to them it was shown that some children continued on at school, for years even, while scarcely any hearing remained, while there were many others who heard very badly; that in disregarding this matter deaf children were placed at a serious disadvantage, and that the time wasted in futile attempts to instruct them was a hindrance to others. Instances of special injustice were cited where children, defective in hearing, had made great efforts both at school and at home to prepare themselves for promotion, only to be put back on examination, because the principal was not aware of the child's imperfection, and therefore had not given his questions distinctly enough to be heard. Other deaf children, from neglect to classify them, were seated too far away from the teacher's desk to hear his voice, and in consequence of inability to reply correctly were frequently punished for inattention and dulness. The rudeness often practised toward these un-

[1] A paper read before the Hospital Committee of the State Charities Aid Association, New York, December 3, 1884.

fortunate pupils by unthinking or unsympathetic teachers was discouraging, and some pupils in consequence had left school altogether.

It was not recommended at this time that the partially deaf should be entirely separated from the hearing pupils, yet it was advised that pupils should always be examined in regard to their hearing, and that those found to be defective should be given every possible advantage, both in respect to seating and to distinctness of voice in teaching, the very deaf should have some instruction apart from others, since they often could not understand words shouted into their ears. The writer did not expect that the long-established order of things could be rapidly changed, but it is believed that teachers have become more interested in the subject than ever before, and that instances of "inattention" and "stupidity" are less puzzling since their true character is recognized. Complaints are now less frequently made by pupils who come for treatment of neglect in this regard, and, indeed, teachers very often recommend that deaf children be brought to our clinics for relief.

Its consideration by the New York Board of Education in 1884.—During the past few months the Board of Education has again taken this matter into consideration, a communication on the subject from the writer having been referred to the Committee on "Course of Studies." The Committee met on November 12th, and on invitation the writer presented some typical cases of aural disabilities in children, and gave the results of his experience concerning deafness in the schools. The Committee have not, as yet, so far as I know, made any recommendations to the Board, but it is to be hoped that some steps will be taken in the matter soon.

Its consideration by the United States Government in 1881.—In the meantime the subject of deafness among school children has attracted the attention of the Educational Department of the United States Government, and the matter being considered important enough to justify a special investigation of its causes, the writer was requested to prepare a paper on the subject, which was printed by the Bureau of Education for distribution in 1881. An examination of five hundred and seventy-five pupils made at that time showed that there were numerous instances of deafness where neither teacher nor pupil were aware of its existence, and that fully thirteen per cent. of the whole number examined had greater or less diminished hearing in one or both ears. Of these, only three per cent. were themselves aware of any defect existing, and only one of them was known to be deaf by the teachers.

Advantages of the study of deafness from a clinical point of view.—A consideration of the subject of aural disabilities should not be confined to observations on children in the schoolroom, where the detection of deafness in many cases must be attended with difficulties, but investigations should also be made at leisure with favorable surroundings and apparatus for obtaining precise results. Hence the more valuable conclusions are to be drawn from examinations in practice, ample opportunities for which may be found in private and hospital experience. Thus from the clinical standpoint it may be premised that a large number of persons come through the ordeal of children's maladies and other ailments affecting the ears either directly or remotely with impaired hearing organs. In some the hardness of hearing is very manifest, in others it is unrecognized, even when considerable. Some apathetic persons disregard deafness, while the more sensitive endeavor to conceal their misfortune.

Estimate of the extent of aural disabilities in the United States.—Careful estimates have been made, indicating that no greater number than five per cent. of the entire population have normal hearing, but this of course does not show the number of persons defective enough to exclude them from the benefits of the ordinary common-school curriculum. The tenth census computes that there are about thirty-four thousand deaf-mutes in the United States, or 1 out of every 1,500. One half of these are illiterate.

Estimate of the extent of aural disabilities in the schools of New York City.—Nearly four thousand deaf-mutes reside in the State of New York, and over one thousand in this city. Of the latter, 575 are in asylums. The number of totally deaf persons of the school age in this city, but outside of asylums, is stated to be 163; but this estimate is much too low, since the enumeration of the census-takers is very unreliable in respect to this class. Parents are slow to acknowledge their deaf-mute progeny, and often the census-takers make no efforts to get at the facts. The writer has met with a considerable number of these children who were not enumerated, and he doubts not that there are no less than 500 of them in this city, of the school age, unprovided with educational facilities.

Before the census of 1880 was taken, the question of ascertaining the number of very deaf people was considered by the special agent, Mr. Wines, but the scheme was abandoned, as it was thought that any returns of this kind would be wholly unreliable unless obtained by the aid of expert examiners. It is, therefore, impossible to give a very close estimate of their number; but if one may form an opinion from experiences in practice, the number having more or less disqualifying aural defects may be put down at no less than ten per cent. of the entire school population of New York City. Thus out of about one hundred and forty thousand pupils in attendance at the public schools at the present time, some fourteen thousand of them would be the better for classification in respect to seating and instruction at close range, or by means of some aid to hearing. These figures show that we have to deal with a vast number of defectives, in respect to hearing, and although this avenue to illiteracy, and consequently to pauperism, was not of much significance when the country was new, it surely demands our attention now, when vagrancy and kindred evils are attracting so much attention from the vastness of their proportions.

The education of the very deaf and deaf-mutes in the day-schools.—While attention has thus been drawn to the wants of the partially deaf, strenuous efforts have been made in behalf of the deaf-mute with a view to improving his educational facilities. The labors of Professor Alexander Graham Bell in this field have been notable, and besides giving much personal attention to the work, his contributions to the literature of the subject have been numerous and valuable. But while the writer himself has mainly had in view the needs of the partially deaf, yet in pursuing this interesting subject from his own point of view, it is to be plainly seen that from a pedagogical standpoint a very considerable number of deaf-mutes, so-called, may be more advantageously provided for in the public day-schools than otherwise.

Day-schools for deaf-mutes have thus been established in the United States as follows: Horace Mann Day-school, Boston, in 1869; Erie Day school, in 1874; Chicago Day-school, in 1875; Cincinnati Day-school, in 1875; Portland, Me., Day-school, in 1876; Rhode Island Day school, in 1877; St. Louis Day-school, in 1878; Oral Branch Pennsylvania Institution, Philadelphia, in 1881; Scranton Oral School, in 1883; Phonological School, Milwaukee, in 1878; A. Graham Bell's School, Washington, D. C., 1883. It would seem that the systems of deaf-mute education were undergoing a transformation at the present time, since hearing defects are beginning to be regarded as constituting a factor of varying importance, no longer offering an insurmountable barrier, in a great number of instances, to an education which shall enable them to hold converse after the manner of hearing persons.

This leads us to express the opinion that very considerable numbers who are at present being educated as deaf-mutes could be cared for in the public day-schools

along with the very deaf who are at present unprovided for, since they both require similar methods of instruction.

Totally and very deaf children, moreover, require taking in hand at a much earlier age than is feasible in deaf and dumb institutions; their education should, in fact, begin much earlier than it is commenced at present; they should be placed in school when four or five years old. Children who have lost their hearing soon after acquiring speech soon forget to talk unless means are promptly taken to keep them in practice. The same rule would apply with equal force to the congenitally deaf, since valuable time is lost when instruction is neglected during the impressible period of early childhood. It becomes a necessity in respect to the education of children at such a tender age that they should be provided for in schools near their homes, an entirely practicable matter, fortunately, in large cities and towns, and even in sparsely populated districts, according to the reasoning of Bell in his "Memoir upon the Formation of a Deaf Variety of the Human Race."

As to disassociating very young children from home influences, the humane impulses of parents are altogether opposed to this; the writer has often witnessed the dismay and grief of parents when informed that their deaf children could obtain an education only in a deaf and dumb institution. There are, perhaps, a few families who prefer to place their children away from home, where the responsibilities of support and training will be assumed by others, but it is otherwise with our better citizens, who desire to have them brought up more as other children.

The education of the deaf in deaf-mute institutions.—In certain institutions an increased interest has shown itself of late in respect to the very considerable number of pupils who have heretofore been treated as totally deaf, but who are, in point of fact, conscious of more or less perception of sound, which may be made available in education. The results alleged to have been attained by means of aural teaching are very gratifying. During the year 1877 the writer visited some deaf-mute institutions with a view to discover what number of these pupils could hear the voice by means of a conversation-tube placed in the mouth or ear, and he was surprised to find a number being educated as deaf-mutes with whom conversation could be carried on orally by the employment of this aid to hearing. Repeated observations subsequently made by teachers have confirmed the above, and it is now believed that of all the pupils in deaf and dumb institutions a large number could be educated through the hearing sense by the aid of speaking-tubes and otacoustic fans, and that a small number hear well enough to be taught by the unaided voice. In the Minnesota institution it has been found that from fifteen to twenty-five per cent. of all the pupils received can be taught by the aural method, and that after being instructed for a time many could hear well enough at the distance of ten or fifteen feet to converse when elevated voice was used.

The confusion and consequent injustice to deaf pupils arising from neglect to classify them properly.—It will be admitted, if the figures above given concerning the deaf be approximately correct even, and it is believed that as further examinations are made they will be found not to be in excess of the correct number, that in so far as educational objects are concerned we cannot separate pupils into two great classes, *one of which can hear well and the other not at all*, by an arbitrary or sudden line of demarcation, inasmuch as the hearing disabilities of children consist in all degrees of deafness, ranging between slight defects and absolute incapacity.

It would seem necessary, therefore, that some practical scheme for the classification of the deaf should be made which would not exclude any from the schools. Under the present arrangement the only class of defectives provided for has been the so-called deaf-mute class, which leaves out of consideration entirely a large number of partially and very deaf pupils, occupying, so to speak, intermediate ground between totally deaf and normal hearing persons. This arrangement absolutely places a certain number of pupils in a worse condition than if entirely deprived of their hearing sense, and in consequence a great many of them find their way into deaf-mute schools. Thus it will be seen that the classification in both the day and deaf-mute schools is defective, and that in any attempt to improve matters we are at once met by a most perplexing dilemma; thus, owing to the long-continued practice of forcing all deaf pupils into either a totally deaf or good hearing class, we find that some of the former and all of the very deaf and partially deaf have been relegated to the hearing schools, while other very deaf persons are classified with the totally deaf and taught as deaf-mutes.

The disadvantages arising in deaf-mute institutions from the want of classification show themselves in many ways; thus, where no useful perception of sound has ever been experienced by a pupil, as in most congenitally deaf persons, there is probably an entire inaptitude for the development of the perceptive function, and while efforts to arouse this dormant function must not be too early abandoned in doubtful cases, yet it is well to consider how much labor can be profitably devoted to the task of teaching such pupils to converse orally. The discouraging results in such cases has doubtlessly been the means of establishing a preference for teaching the sign language, since in overcrowded deaf-mute institutions this method has the advantage of being inexpensive—an important item where the corps of instructors is small. It has been estimated that about ten per cent. of deaf-mute pupils belonging to this class cannot learn to speak intelligibly unless much more attention is given to their instruction than is practicable in any public school.

The mediocrity of results attained is further increased by the mental inertness of deaf-mute pupils either admitted when too old to adapt themselves successfully to study or retained too long after reaching adolescence.

The duty of the State in respect to the education of the deaf.—The opponents of the proposed reform for teaching these defectives in the public day-schools assert that the policy of the State is to exclude all who cannot be regarded as having *average* mental and physical qualifications; but no one has ventured to define this standard. Indeed, it would be difficult to do so: and were all of the *average* pupils selected, what should be done with the remaining pupils? This question has thus far been only tentatively met by the attempt to separate all pupils into good hearing and totally deaf classes.

By many it is held that our public-school system has for its principal object the prevention of illiteracy among the poor, and if this view be correct it can scarcely be regarded as consistent on the part of the advocates of educating the average child only to oppose a scheme for the promotion of the interests of a needy but uninfluential class, while fostering expensive institutions for the free education of the better-to-do, and going so far even as to expend large sums of money in giving *special* instruction in German, French, Music, etc.

This was certainly never contemplated by those who founded the common-school system. Nor is it humane to leave the care of this defective class to the uncertainties of philanthropic aid. The State already has abundant facilities for the care of all the deaf-mutes who cannot be educated in connection with the day system of public schools, and inasmuch as these institutions will soon be overcrowded by the natural increase of this class, it would seem that facilities should be provided for them in the day-schools without delay. There are, already 17,000 deaf and dumb persons of the school age in the United States, according to the census of 1880, only 5,000 of whom were in institutions. As has been stated, there are already in operation in various sections of the country eleven day-schools for the deaf, nine of

which, at least, are under control of the the local boards, and a bill is now before the Wisconsin legislature to authorize Boards of Education to take charge of deaf-mutes and place them in the day-schools.

The expense of educating the deaf in day-schools as compared with their education in institutions.—The question of reform in the education of the defective in hearing is to a certain extent a question of expense; that they must receive educational facilities will not be denied.

Let us consider the result in this regard of transferring to the day-schools what may be regarded as their legitimate share of work. The outlay by the State would probably be lessened, so far as the deaf-mutes are concerned, and, on the other hand, it would be slightly increased were proper methods introduced for the instruction of the very deaf and partially deaf.

At the present time it costs the State to support and instruct deaf-mutes in its seven asylums $250 per capita annually. It will thus be seen that were classes of ten formed in the public schools, which is a smaller number, I believe, than in asylum classes, and a teacher secured at the rate of $800 per annum, there would be a saving of $170 per pupil. Where smaller classes of children were formed, as might be done in the country, the saving would be less. I have no exact figures upon which an estimate of the number of partially deaf can be based. I know of but one extensive examination in this direction, besides my own; this was made by Weil, of Stuttgart, and published in the *Archives of Otology* for 1882. It embraced the results of an examination of the ears and the hearing of school children of different social grades. In some schools the percentage of those who heard badly was as high as 30 per cent. My own examinations, embracing 570 pupils, were made in the intermediate and primary grades and included some in the Roman Catholic Parochial and in the Colored Schools of this city. It has already been stated that about thirteen per cent. of these had greatly diminished hearing, but it would be impossible to estimate the number whose hearing required teaching by special methods without a careful and extensive examination being made. From the large number met with in practice, however, I believe the number to be considerable. These, however, could be taught in classes of twenty, and the increased expense would not be great; such pupils are at present taught, if they attend school, in classes with hearing children, and the increased expense in reducing the size of classes to accommodate them may be easily computed.

There need be no expense for new buildings, the structures at present in use for school purposes being sufficient, since it is thought best not to separate one class from another entirely any more than the different grades are now taught apart. Some instruction would be common to all.

Teachers of deaf pupils.—Many teachers have already fitted themselves for this work, and it is a significant fact that the growing demand for better instruction of the deaf has enabled them to find ready employment either in families or in conducting small private day-schools, since parents are willing to incur this extra expense rather than place their children in deaf-mute institutions. Where this expense cannot be borne, and parents are unwilling to send their children away from home, it seems that to exclude them from the advantages of day-schools is to disregard their rights.

The examination of pupils in the public schools with a view of determining their hearing power.—It will not be denied that these disabilities among pupils should be known to teachers in order that instruction may be made more successful, and it therefore becomes important to adopt some plan for correctly determining the hearing power of all school children, so that where any defect exists pupils may be placed under the best possible advantages. While teachers are known to often fail to discern marked departures from the normal standard, and children themselves cannot always give reliable information, yet much could be accomplished by principals and teachers were they assisted at the start by an expert in such matters, especially so far as the majority of pupils are concerned; but where it becomes important to ascertain the exact state of the transmitting apparatus of the ear, and the condition of the nerve-tract connected with audition, an expert examination would be required.

The importance of early training for deaf children.—Too much stress can scarcely be laid on the value of results obtainable in this way if early made, since the perceptive power may be much quickened by training in many instances, even where the middle ear apparatus is defective. It would appear to be on the development of the perceptive tract, rather than on any change in the transmitting mechanism, that mental improvement depends in the very deaf who are taught aurally. The expert himself finds it no easy task to get at the facts in certain cases, especially in young children who have already been instructed as totally deaf, since they soon come to disregard the hearing sense entirely, and it remains to be determined in such cases how much the auditory nerve has deteriorated from disuse. The professed indifference to hearing should never prevent some attempts being made at instruction through the hearing organs, since a surprising amount of hearing may thus be found to exist. How many children one meets with who are backward in learning to talk, but finally on getting to be three or four years old gain their speech! Such children would get on much faster in many instances, it is believed, if regarded as partially deaf. While treating such children professionally I have seen beneficial results from the use of conversation-tubes, or the employment of voice at close range. This practice cannot be too early commenced. I have observed good results in children as young as eighteen months. In observing these cases one cannot but be impressed with the importance of normal hearing in the ready acquirement of speech, and that however imperfect the hearing may be, it has its uses in acquiring language.

The hearing that remains after injury of the ear-drum.—Often after great impairment or destruction of the transmitting apparatus of the ear-drums, a very efficient passage of sound to the auditory nerve remains; but as this becomes more and more difficult, it deteriorates in quality, especially for long distances, until finally its rendition in the very hard-of-hearing becomes so crude and indefinite that interpretation by the perceptive tract is difficult or even impossible. Now, when sound ceases to be transmitted in this manner, hearing may take place by means of the passage of sound up through the tissues of the head to the perceptive tract as propagated by means of the otacoustic fan placed on the teeth, or the conversation-tube placed in the mouth. In the former instance sound passes more directly along bone structure from the teeth, while in the latter it ascends to the vault of the resonating chamber at the top of the pharynx and thence up through the tissues of the head. Voice-sounds imparted to a pupil in the manner just mentioned are of very great value in certain cases, because of their tones being natural, and the pupil's own voice is even more effective in this respect since it is propagated upward with much energy by his own vocal efforts against the moist and highly receptive pharyngeal vault.

The classification of the future.—No time should be lost in taking steps in this direction; a little classification must necessarily pave the way to improvement in the education of the deaf of every degree. It should be kept in mind, however, that, in a certain proportion of the partially deaf, the defectiveness is transient and variable; and that in some of the more difficult cases among the very or totally deaf, repeated examination will have to be made when any doubt as to the diagnosis remains.

Before quitting this subject I desire to mention Bell's useful device for testing the hearing.

The audiometer arranged by Professor Bell.—This instrument, for all practical purposes in testing the hear-

ing power of the different classes of deaf persons, answers almost every requirement, and its introduction will very much facilitate the work of classification when used by an intelligent and trained examiner.

CHRONIC PNEUMONIA, PHTHISIS, AND MILIARY TUBERCULOSIS IN THE LIGHT OF RECENT DISCOVERIES.

By EDMUND C. WENDT, M.D.,

CURATOR TO THE ST. FRANCIS HOSPITAL, NEW YORK.

It is the opinion of the writer that the micro-parasitic nature of genuine tuberculosis may now be accepted as proved by the convincing force of exact experimental demonstration. In this direction few will to-day attempt to dispute the correctness of Koch's well-known assertions. But practical clinical investigation must needs supplement, modify, or perhaps even disprove some of the later claims put forward by Germany's noted mycologist. In the second volume of the *Mittheilungen aus dem Reichsgesundheitsamt* Koch has recently published more extended observations, dealing principally with the etiology of tuberculosis. One highly important statement, to my mind, is to the effect that the repeated entrance into the healthy human lung of small numbers of the specific bacilli of tuberculosis results in chronic phthisis, whereas the simultaneous admission of numerous microbes produces acute miliary tuberculosis. This ingenious, significant, and far-reaching hypothesis certainly requires corroborative elucidation at the hands of careful clinical observation before it can command universal acceptance. Experiments upon animals will not suffice in this particular instance to decide the matter for the human family. Above all things it remains to be shown how and when, in the individual case, the dangerous microbes have effected their entrance into the system. Nor can we tell as yet why such an entrance takes place so easily in some cases, indeed occurs in a certain proportion of them with all the certainty of an inevitable doom. Again we are yet ignorant of the true reason why the same thing happens in other persons with tedious difficulty, and, as it were, only after the surmounting of formidable opposition on the part of a struggling constitution. And finally we have but very inadequate knowledge concerning the rationale of the well-attested fact that a large class of persons will refuse to contract phthisis at all, even under circumstances seemingly the most favorable for its acquisition.

These and other practical questions that suggest themselves in connection with phthisis, chronic pneumonia, and miliary tuberculosis, merit the earnest attention of the medical profession.

Drs. Biedert and Sigel have recently devoted much time to studies in this direction, and the results of a goodly series of careful clinical observations are published by them in the current number of *Virchow's Archiv*. The cases recently published by Dr. Kinnicutt and the writer (see THE MEDICAL RECORD, October 11 and 18, 1884) also show that the practitioner is liable at any time to be confronted with problems that may seem hopelessly puzzling, unless the new light of modern pathology can clear away the obscurity of some of their features.

Biedert and Sigel, in the article alluded to, directed their attention chiefly to the following points: In the first place they tried to determine the relation of the discovery in the sputum of tubercle-bacilli to the different clinical forms of consumption. Thus advanced phthisis and the incipient variety would presumably differ from each other, as well as from certain other pulmonary processes partaking of the nature of chronic inflammation. Then they wished to ascertain more definitely in what manner the appearance of increasing or decreasing proportions of bacilli, kept pace with the gross physical changes witnessed in their patients. And again they attempted to find out the precise conditions of the first appearance of bacilli in the sputum of persons already afflicted with pulmonary disease, and especially what effects were observable in such patients while living for long periods in the same rooms or wards with cases of pronounced phthisis.

It will not be possible here to follow the authors through the elaborate details of their painstaking investigations. They had an abundant clinical material that was put to the best possible use for deciding some of the problems and questions here barely indicated. The conclusions drawn from their observations may, however, profitably engage our attention. To begin with, they cannot regard the bacillus tuberculosis as distinguishable from all other bacteria by the mere peculiarity of its shape. They are not even quite certain that the color-test is sufficiently characteristic to invariably prevent all error. But, on the other hand, they fail to indicate any better method of differential recognition. In pronounced tubercular phthisis, Koch's bacilli are never found wanting from the sputum. Indeed, the presence of these microbes is the essential and vital point connected with that disease. Phthisis being by no means an affection that always starts at the apex of the lung, and being, moreover, a disease with at times misleading physical signs, the discovery of the specific micro-parasite is the one and only reliable and never-failing sign of its actual presence. Obviously the importance of this point, at least in a diagnostic point of view, can hardly be over-estimated. It amounts to the *de facto* existence of a symptom that is in the strictest sense pathognomonic. The discovery, in a given case, of the presence of tubercle bacilli would, then, according to these writers, have all the binding force of an irrefragable mathematical demonstration. And the diagnosis of tuberculosis would thus be capable of absolute scientific proof, possibly long before the grosser methods of physical examination could have revealed it.

But there occur, as we all know, obscure cases of insidious disease that are by many regarded as latent phthisis or possibly incipient consumption. The absence of bacilli in them would show that, as yet, tuberculosis is not present. Indeed, non-specific pulmonary infiltrations probably always precede the tubercular invasion. And there can be no doubt that such non-bacillary infiltrations may and commonly do accompany the specific lung lesions of true tuberculosis. The preponderance of one or the other of these distinct morbid processes may, perhaps, be gauged by comparing physical signs with the proportion of bacilli discoverable in the sputum.

In the course of the disease the non-specific lesion may assume the important rôle of acting as a barrier against the further encroachments of bacillary infiltration. On the other hand, it may happen that a comparatively harmless, because non-specific infiltration will furnish suitable soil for the growth and multiplication of the bacilli, and in that way exert a baneful influence on the health of the patient by its subsequent conversion into a specific infiltration.

The process which prepares the lung for the favorable reception of the bacilli is in itself a pathological one, being characterized by distinct cellular hyperplasia. It is noticeable that many of the new-formed cells have a spontaneous tendency toward degeneration. Nor can they long resist the virulent attacks of the micro-parasites. It would seem, however, that the latter are impotent to harm healthy cells. Indeed, they sooner or later perish in any conflict with normal tissue.

Biedert and Sigel further conclude from their observations that phthisis is not an infectious malady, and very certainly not a contagious one, in the usual sense. For consumption owes its origin not solely to the agency of an infectious virus upon a healthy organism. It distinctly needs preparatory changes, such as a vitiated constitution, lungs already damaged, or other predisposing elements, before a bacillary invasion can take hold and work further evil.

Even miliary tuberculosis has not been clinically shown to depend upon the introduction of large numbers of bacilli into previously healthy human lungs. Here, too, some morbid change must have been pre-wrought before the accidental inhalation of specific microbes can prove the starting-point of rapidly fatal disease.

If we accept as trustworthy the statements of these authors, it follows that the prophylaxis and rational treatment of phthisis are likely to remain in the near future, what they have been in the near past. That is to say, our attention must be directed chiefly toward constitutional improvement, with such hygienic and local measures as common-sense will dictate.

An anti-tubercular specific does not exist, and even should one be discovered it would be found impotent in those frequent cases where a vitiated constitution, an hereditary taint, lack of food, and unsanitary surroundings more than suffice to doom the poor human sufferer to an early grave. We may remember in this connection the words of Eisenmann: "Tubercles are but the tears of the poor shed within." It is not the wish of the writer to add to the length of this paper, which is based chiefly on the article of Biedert and Sigel, by an account of his own observations. The latter, although quite insignificant numerically, when compared with those of the authors mentioned, have nevertheless strengthened his belief in the substantial correctness of their views. Certainly there is a large field for further work here, a field rich in promise of practical results. It is to be hoped that the ground will not be allowed to lie fallow, and that our own country may contribute its contingent of faithful, tireless tillers in the twin cause of humanity and science.

The Kensington, 102 East Fifty-seventh Street,
December 13, 1884.

AN ANOMALY OF A VERTEBRA,

With a Suggestion Regarding the Causation of Certain Forms of Spinal Irritation.

By E. C. SPITZKA, M.D.,

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While examining some specimens in the anatomical collection of Professor William Darling, M.D., F.R.C.S., of this city, I was struck by a peculiarity of one of the vertebræ, which, without claiming a complete knowledge of the recorded anomalies, I believe has not been described. At all events, attention is not directed to it in any of the accessible handbooks.

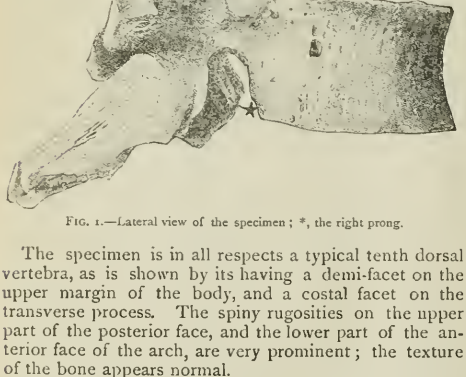

Fig. 1.—Lateral view of the specimen; *, the right prong.

The specimen is in all respects a typical tenth dorsal vertebra, as is shown by its having a demi-facet on the upper margin of the body, and a costal facet on the transverse process. The spiny rugosities on the upper part of the posterior face, and the lower part of the anterior face of the arch, are very prominent; the texture of the bone appears normal.

On the anterior face of the arch, immediately above the inferior articular processes, two powerful prongs of bone jut downward, as if—in the recent state, when the vertebræ were connected—to overlap the superior articular process of the next vertebra below. The disposition and dimensions of these prongs are so evident from the accompanying drawings, which are of the natural size, that I do not consider it necessary to tire the reader with a list of measurements.

Regarded laterally, it is clear that these processes must have encroached (particularly when the periosteal lining is considered to have been added) on the calibre of the intervertebral foramina (Fig. 1). Regarded from above, it is equally clear that they must have encroached on the spinal canal, whose contents here consist not alone of the cord and its membranes, but also of enormous descending nerve-trunks.

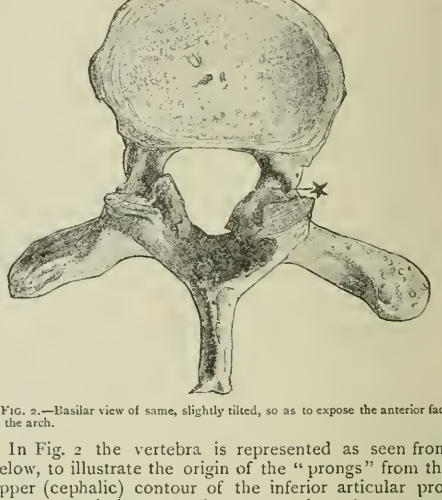

Fig. 2.—Basilar view of same, slightly tilted, so as to expose the anterior face of the arch.

In Fig. 2 the vertebra is represented as seen from below, to illustrate the origin of the "prongs" from the upper (cephalic) contour of the inferior articular processes. Their internal edge merges into the rugæ on the anterior face of the arch, of which they are probably hypertrophied continuations. The dorso-ventral face of the right prong turned toward the facet of the inferior articular process was rough, and showed an approach to the stalactite-like structure of the rugosities to which the vertebral ligaments are attached. This resemblance indicates to my mind the origin of these processes, namely, an ossification extending into the ligamentous structures, uniting the articular parts of the arches. That such a contrivance would render dislocation of the arches impossible is evident, and comparative anatomy furnishes more than one instance of a parallel proviso on the part of the vertebral fastenings.

The left upper articular process had an extension of bone glued to its anterior face, the separation was well indicated by the different character of the bone, and a deep ravine between them.

From the fact that the symptoms of spinal irritation are often localized around a single or one or two vertebræ, mechanical, thermal, or electrical applications to which often suffice to modify or provoke the numerous and variable subjective (and objective vaso-motor) symptoms of that disorder, it would seem plausible to connect this state with some irritating cause operating on the nerves at their exit, or the membranes of the cord and nerve-roots within the spinal canal. Injuries to the vertebral column, notably to the coccyx—as in three cases in my experience—are competent to provoke such symptoms, and it is not unlikely that such an hypertrophy of bone tissue as that described here may accompany or—developing spontaneously—cause this disorder. The

evil and apparently disproportionate effect of spiculæ pressing on the cranial dura, is an acknowledged dogma of neuropathology, and the analogy between that dogma and the explanation of spinal irritation here suggested is very great. In both cases the essential nervous tissues are not destructively involved, the primary tissue to suffer is the fibrous envelope. In both cases this fibrous envelope is supplied by nerves whose deep origin is in the contained neural viscus, and in both the functional effect is remote and usually manifests itself in the vaso-motor realm.

Six years ago I had referred to me, by Dr. H. Knapp, a school-teacher from the Carolinas, who suffered from aggravated spinal irritation. I became satisfied that a fracture or distortion of the upper part of the coccyx was the fundamental cause of her malady, and at my suggestion Dr. James L. Little removed the part below the point of union, which latter was at right angles. The patient returned to her home, and Dr. Knapp informed me that she was relieved of all her nervous symptoms. What is shown to be true of the coccyx in this case, where the *sublatâ causâ tollitur effectus* argument was so happily illustrated, is probably true of the more important parts of the vertebral column.

The condition of the vertebræ and their ligamentous structures has not been studied in connection with spinal irritation, and this very naturally, as such a study is difficult, involves much mutilation in a hurried autopsy, and autopsies in cases of spinal irritation are at best few. Nothing is known of the clinical history of the subject from whom this bone was derived, nor are other parts of its skeleton identifiable in the collection.

To Professor Darling my thanks are due for the loan of the specimen from which the accompanying drawings were made by the author.

Progress of Medical Science.

Tuberculosis of the Eye.—The *Revue Médicale*, October 18, 1884, gives the case of a child who, eight weeks after an injury to the eye, showed cheesy masses on the conjunctiva near the external canthus. On microscopical examination they were found to be tubercular infiltrations. The same journal also contains the following general remarks regarding ocular tuberculosis. The eye may be invaded by tubercle either primarily or secondarily. Every part of the organ where vascular tissue occurs may become the seat of tubercle. Thus it has been found in the iris, choroid, conjunctiva, and once or twice primary tubercle has been observed in the retina. The ciliary body may also be invaded by primary or secondary tubercle, the latter usually following a tubercular granuloma of the iris.

A French Treatment for Ulcer of the Leg.—Dr. Vidal recommends (*L'Union Médicale*, October 12, 1884) the following treatment, which he has found very efficacious, especially for indolent ulcers with pale base and ichorous secretion: First, wash the ulcer with an infusion of oak-leaves, then cover with a layer of subcarbonate of iron. A poultice of potato starch is then applied and retained by a roller bandage. Healing is complete in from ten to forty days. The subcarbonate of iron has an action upon the ulcer at the same time astringent and tonic. It gives new life and activity to the tissues. The galvanometer shows a considerable giving off of electricity, which explains, according to the author, the beneficial action of the iron.

Experimental Study of Chronic Alcoholism.—For the past three years Dujardin-Beaumetz and Andigé have been engaged in studying the effects of alcohol, chiefly upon pigs. The hog was chosen on account of the resemblance of the alimentary system with that of man, and for the further reason that the alcohol could be readily given. A variety of alcohols were experimented with, ranging from the high grade ethylic, at one hundred per cent., to the low grade beet-root, at thirty-four per cent. The daily dose was from one to two drachms to every ten pounds of live weight. This was given for thirty months, mixed with their daily food. In the intoxication produced, the stage of excitement was wanting, stupor being the first effect. The changes observed consisted in congestion and inflammation of the intestines, hyperæmia of the liver—not, however, going on to interstitial hepatitis—pulmonary congestion, and intramuscular hemorrhage. Hæmaturia and albuminuria were never present. The heart and kidneys were found fatty at times, but, as Cornil has previously shown, this is an almost constant condition in the pig. The lesions were much less marked in those experimented upon with the rectified and ethylic alcohols than in those given the poorer beet-root and potato alcohols.—*L'Union Médicale*, October 2, 1884.

The Dyspnœa of Bright's Disease.—A communication on the varieties of dyspnœa met with in Bright's disease, by Dr. Howard, of the McGill University (*Canada Medical and Surgical Journal*, November, 1884), illustrates the following points: 1. That marked dyspnœa may occur in Bright's disease not due to gross lesions in the lungs, pleura, or heart—such as inflammation or œdema of the lungs, hydrothorax, or pleurisy with effusion, endo- or peri-carditis, or valvular disease. 2. That it may be a continuous dyspnœa, or of paroxysmal character, resembling ordinary spasmodic asthma; and that these types may occur in the same case, although, in my experience, the continued variety is more frequent than the asthmatic. 3. That these forms of dyspnœa may occur as the prominent symptoms of renal disease, and their origin may escape recognition if the urine be not carefully examined, as well as the heart and pulse. 4. That Cheyne-Stokes respiration is often a symptom of Bright's disease, and that it obtains in both acute parenchymatous and in chronic interstitial nephritis. 5. That while usually an evidence that the fatal issue is near at hand, it may occur in a chronic form, and may occur for weeks, perhaps even for years. 6. That these several forms of dyspnœa just mentioned are very probably due to that defective renal elimination called uræmia. 7. That in the acute forms of Bright's disease, serious or fatal dyspnœa sometimes, but rarely, occurs in connection with effusion into the submucous membrane of the larynx (œdema glottidis).

Do Calcareous Concretions of the Lungs contain Bacilli?—The Paris correspondent of the *British Medical Journal* writes that M. Déjerine has made a series of researches to ascertain if the bacillus of tuberculosis is present in the calcareous concretions, surrounded by a zone of interstitial pneumonia, often observed at the apex of the lungs of old people. There are different varieties of these concretions; some are as hard as stone, others calcareous and cheesy, or as soft as pulp. In veritable cretaceous concretions, M. Déjerine only once ascertained the presence of two or three bacilli; these were used for inoculating rabbits, which, after seven months' interval, were entirely free from tuberculous lesion. In the calcareous cheesy masses the cretaceous concretion is always in the centre of the cheesy portion. M. Déjerine invariably detected bacilli in the non-calcareous part, and they contained more spores than the bacilli of a tuberculous lesion in the process of evolution. These remains of an arrested disease of parasitic origin are of special interest, as an examination may establish the distinction between the cheesy calcareous masses of tuberculosis, and similar degenerations found at the necropsies of syphilitic patients. M. Déjerine observes that the absence of bacilli does not necessarily prove that tuberculosis does not exist; he has been unable to detect the presence of a single bacillus, although the necropsy clearly demonstrated the presence of tuberculosis. M. Malassez says that the

spores of bacilli appear or disappear according to the coloring substance used. If fuchsine be used they assume the appearance of unbroken rods; if gentian violet, of spotted rods or a row of seeds. This difference of aspect may be interpreted in two different ways; it is possible that the substance which unites the seeds or spots can be colored by fuchsine and not by gentian it is also possible that the appearance is an optical effect due to the nature of the coloring substance.

Nephrectomy in Infants.—At a recent meeting of the London Clinical Society, Dr. Godlee reported a case of nephrectomy done in an infant. The child, a boy, aged one year and ten months, was admitted under his care at the Northeastern Hospital for Children in August, 1883. The tumor was first noticed in June, 1883, and was growing rapidly. It was on the right side, and measured four inches in the long diameter and about two in the short. It was freely movable, and manipulation caused no pain. There were no urinary symptoms at all. The kidney was removed by the lateral abdominal (Langenbuch's) incision, and was readily accomplished, as there were no adhesions to surrounding structures. The cæcum and the duodenum were the only pieces of bowel exposed. One large vein, which ran over the tumor, alone required ligature. There was no hemorrhage of consequence, and the whole operation was concluded in half an hour. The child had no symptoms of any kind after the operation. It ate and slept as well the next day as before, and the temperature only rose to 99° once, the day after the operation. It left the hospital, well, six days later. It continued well till February, 1884, when recurrence took place in the right iliac fossa and rapidly increased in size, passing down into the scrotum, and the child died soon after. Dr. Godlee mentioned eight other cases which have been recorded, showing that of them five had died of the immediate result of the operation, two had recovered well, but died afterward of a recurrence, and one was well when last heard of, but notwithstanding the unsatisfactory nature of the results he argued that, seeing how hopeless the condition is if left alone, we should endeavor to remove these tumors in a still earlier stage, at all events until it is proved that even this proceeding is invariably followed by a fatal result. He particularly, however, pleaded against attempting the removal of the very large growths which are not unfrequently met with, showing that they will almost certainly have involved surrounding structures, and that thus while no good can follow the operation an immediately fatal result is probable. The tumor weighed about one pound, and was in structure a mixed sarcoma, most of the cells being roundish or oval, but some spindle-shaped. This is probably the usual composition of these growths, but another class was mentioned in which striped muscular fibres occur. The latter are probably congenital, and often affect both kidneys, and are thus not favorable for surgical interference.

Blood-Poisoning Following Human Bites.—The Paris correspondent of the *London Lancet* reports two cases of this kind, which serve to illustrate the danger sometimes attending the infliction of human bites. A lad of eighteen, employed as a waiter at a public-house, was guilty of some misdemeanor, and while his employer was remonstrating with him, the lad, fearing a thrashing, took hold of the right hand of his master and bit him severely on the thumb. The publican dismissed the lad on the spot, had his thumb dressed, and thought no more about the matter. But about two months after the bite phlegmonous inflammation set in, and the patient was carried off in a few hours, death, according to the medical attendant, having been caused by blood-poisoning. In a recent quarrel between two newspaper editors in Paris, one bit the hand of the other, soon after which lymphangitis set in in the arm of the wounded patient, which was accompanied by symptoms of erysipelas, from which, however, he soon recovered.

Muscular Rupture simulating Abscess.—Dr. Phocas relates, in *La France Médicale*, September 25, 1884, a case of rupture of muscles in the lumbar region which simulated abscess and caused symptoms similar to those of lateral curvature of the spine. The patient, a young man, had first experienced pain in the left side. Three weeks later he began to walk with a limp and lean to the left side. He was, therefore, examined for lateral curvature. This was not found to exist, but a swelling to the left of the spinal column, painful on pressure and fluctuating in its central part, was made out. After repeated examinations it was regarded as an abscess and operated upon under chloroform. Careful dissection brought to light a rent in the lumbar aponeurosis, through which a hernia of the mass of sacro-lumbar muscles protruded. Underneath this hernia was a tumor covering the quadratus lumborum, and adherent to its outer border, as well as to the abdominal muscles and aponeurosis. The tumor measured about two inches in diameter, was of a yellowish color, of soft consistence, and fibrous aspect. Under the microscope it was found to be composed of altered muscular and fibrous tissue. The patient made a good recovery, and was soon able to leave the hospital, free from any signs of curvature, lameness, or deformity.

Sclerosis of the Coronary Arteries.—This condition has received more attention of late from both pathologists and clinicians, since the connection between pathological changes in the muscular tissue of the heart and diseases of its vessels has been better understood. Samuelson found that cutting off the circulation in the coronary arteries caused a notable diminution in the force of the cardiac contractions, and a corresponding lowering of the blood-pressure, while in some experiments by Cohnheim and Schulthess-Rechberg the heart continued to beat forcibly but somewhat irregularly and then suddenly stopped. The diseases of these vessels have been classified and described by Leyden upon the basis of an extensive clinical experience. Pathologically he distinguishes: 1. Sclerosis or ossification of the coronary arteries without any other cardiac lesion. The muscular wall is not diseased, and death occurs from some intercurrent affection. 2. Acute thrombotic softening or hemorrhagic infarction of the cardiac muscle following sclerotic thrombosis of the coronary arteries—*myomalacia cordis* of Ziegler. This leads eventually to fatty degeneration or softening of the region supplied by the occluded vessels, which is the most frequent cause of rupture of the heart. 3. The chronic form, fibrous degeneration of the muscular tissue—*myocarditis fibrosa*—arising from induration of the diseased vascular territory. At the apex aneurism of the heart frequently arises from this cause. 4. A combination of these several lesions. This is the most frequent condition.

Clinically these varieties occur in a more or less acute or chronic form. The author divides them into: 1. Cases running an acute course and ending in sudden death. Death occurs in syncope or after an attack of angina pectoris. The autopsy shows sometimes very marked, and sometimes very insignificant, anatomical changes in the heart-walls. These are rupture of the heart, sanguineous infiltration with effusion of blood into the pericardium, softening of the heart, or small patches of fatty degeneration in the muscular wall. To this form belong the cases described in the literature as embolism of the coronary arteries, a frequent symptom of which is a markedly slow pulse, or sudden paralysis of the heart may occur. 2. The subacute form, in which the course of the disease embraces a period of several weeks. The early symptoms are cough, shortness of breath, oppression, often attacks of angina pectoris, and sometimes dropsy. A slight improvement occurs, then the symptoms return with great severity and death ensues. After death we find myomalacia, sanguineous infiltration, fatty degeneration, and old fibrous bands. 3. The chronic cases usually described as chronic myocarditis, fibrous myocarditis, dilatation or aneurism of the heart. In per-

sons of advanced age cardiac symptoms appear gradually, having periods of abeyance. These symptoms are those of angina pectoris or cardiac asthma. The course is always progressive, and as the symptoms become more severe the patient presents a picture of severe heart disease. The asthma increases, dropsy occurs, and sometimes in delirium, sometimes suddenly, usually after suffering for several years, the patient succumbs.

Thus sclerosis of the coronary arteries presents itself as an acute or chronic disease, with more or less severe cardiac symptoms, occurring late in life, and independently of any valvular lesions. The heart symptoms are vital or physiological rather than physical. These are angina pectoris, asthma, cardiac weakness, syncope, and changes in the frequency and rhythm of the pulsations, the pulse being sometimes reduced to eight in the minute. The physical sign is that of dilatation of the left ventricle, with, usually, hypertrophy of the right. The signs on the part of the respiratory system are cough, dyspnœa, pulmonary engorgement, and occasionally also œdema of the lungs. The chief cause of the disease is heredity, although the abuse of alcoholic liquors and high living play a certain rôle in its production. Prolonged mental and physical exertion is also to be reckoned among the causes, and the author lends the weight of his authority to the popular belief of a "broken heart" from grief and anxiety.—*Centralblatt für Klinische Medicin*, No. 38, 1884.

The Etiology of Trichorrhexis Nodosa.—In opposition to the opinion of Eichhorst, who has recently written upon this condition, Dr. Wolffburg states that the sole cause of trichorrhexis nodosa is the improper care of the hair. He showed in his own person that it could be produced in the beard on one side by rubbing it energetically and frequently, the other side meanwhile being normal. The following are the grounds upon which the author bases his belief in the mechanical causation of trichorrhexis (*Centralblatt für Klinische Medicin*, No. 38, 1884): 1. The anatomical appearances—the hair, except for the nodules, is healthy. 2. The localization—the affection has hitherto been observed only in the larger hairs of the beard, and especially in those so situated as to be most exposed to mechanical injury when the face is rubbed, as in the beard covering the lower jaw. 3. The explanations hitherto offered are insufficient. 4. The supposed incurability of the affection is easily explained when one remembers that the treatment usually recommended (frictions with alcoholic preparations or irritating salves) only furnished new sources of irritation to the ill-treated beard.

The Prognosis of Spinal Curvatures.—The following are the principal conclusions of M. Pravaz in a recent article on the curability of deviations of the spinal column (*Centralblatt für Chirurgie*, No. 39, 1884): Of special importance in the prognosis of curvatures of the spine is the condition of the general health. The existence of any dyscrasia, especially of chlorosis, renders the prognosis less favorable. For in an individual suffering from mal-assimilation the skeleton is not sufficiently resisting to maintain the good results obtained by the use of apparatus; and sometimes in these cases there are such disorders of circulation as to interfere with the use of supports. In general, the younger the individual the more easily is the deformity overcome, yet it is the rule that the treatment must be longer continued in children than in adolescents, as it is less easy to adjust the apparatus for them, and the liability of relapses is greater. The author opposes forcibly the widespread error that curvatures of the spine will disappear as the child grows older. The curvatures following pleurisy are of unfavorable prognosis, as are also those produced by paresis of the spinal muscles. Of the deformities caused by disease of the osseous system those due to rachitis present the greatest difficulties in the way of treatment, for unless the deformity be overcome before the period of ebunration its correction becomes almost impossible. The prognosis of ordinary scoliosis depends greatly upon the amount of rotation present. When taken early in hand a curvature of even considerable extent may be overcome, as soon as the general health is improved. The prognosis of a dorsal curvature is more favorable than that of a lumbar deviation. Other things being equal, the curvatures with a long radius offer greater chances of cure than those with a short radius. This is because in the latter case the individual vertebræ are more wedge-shaped, and consequently are less likely to become restored to their normal dimensions.

The Antidote for Resorcin.—It having been remarked that in resorcin poisoning the arteries were nearly empty while the veins were engorged, Dr. Justus Andeer proposed the use of hot baths in order to deplete the venous system. He found, however, on experiment, that warm baths rather increased the severity of the symptoms caused by the resorcin poisoning. After casting about in several directions for an antidote, he finally discovered that the very best was good red wine—either Bordeaux or Burgundy. This acted equally well in slight and severe cases of poisoning from this substance. The author did not approve of the practice of giving an emetic, since by the time the dangerous symptoms had appeared the drug taken into the stomach had been entirely absorbed. If, however, there were any reason to suppose that such were not the case, the best emetic to employ was apomorphia given hypodermically. But red wine, he claims, is the true and certain antidote to resorcin.—*Wiener Medizinische Presse*, No. 38, 1884.

Minute Doses of Calomel in the Treatment of Pneumonia.—Dr. Droux de Chapois relates in the *Bulletin Général de Thérapeutique*, vol. cviii., No. 2, 1884, several cases of pneumonia in which resolution was delayed for a very long time, where an excellent result was obtained by fractional doses of calomel ($\frac{1}{15}$ grain) repeated every hour. He advises a recourse being had to this treatment whenever, despite the ordinary remedies, the symptoms grow worse instead of better, when the tongue becomes dry, and when the skin imparts a sensation of great heat and dryness to the finger. He mixes one grain of calomel with a teaspoonful of powdered sugar, and after it has been thoroughly stirred for some minutes divides it into twenty-five powders. Within twenty four, or at most forty-eight hours, he states, the skin becomes damp, the temperature falls, the tongue becomes moist, and the oppression diminishes. Sometimes a liquid stool occurs after fifteen or twenty doses have been taken; when this occurs the dose is reduced to $\frac{1}{60}$ grain every hour. Sometimes no stool occurs, but colicky pains are complained of. In this case it is not necessary to withhold the drug, but only to give a little magnesia with it.

The Chemical Poisons formed within the Intestinal Canal.—Dr. Netler concludes a long review on this subject as follows (*Archives Générales de Médecine*, October, 1884): The presence of inferior organisms produces, in the course of decomposition of nitrogenous matters, toxic substances of greater or less activity. These putrid poisons, or ptomaines, exist not only in putrefaction occurring without the body, but are present also normally in the digestive canal, and even in the blood. They play a very important part in pathology, and to them may be attributed: 1, poisoning by putrefactive matters, in which the poison, formed without the body, enters the organism by way of the intestinal canal or a wound; 2, putrid auto-intoxication, due to the action of ptomaines formed within the digestive tube; 3, the rôle of these ptomaines is very important, though at first sight less evident, in uræmia and acholia due to changes in the kidneys or liver. In these cases the alkaloids, not being excreted by the diseased organs, accumulate in the blood, and give rise to symptoms of poisoning.

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THE NEW HEALTH BILL BEFORE CONGRESS.

IN a previous article we called the attention of the American Public Health Association, then about to assemble in St. Louis, to the importance of maturing measures thus early to be adopted and enforced in the event of an epidemic of cholera in this country. The questions which we raised were as to the best methods of securing concert of action of all State and municipal boards of health, and of bringing into active co-operation with these boards the General Government. The Association gave these subjects due consideration, and adopted a report embodying a scheme of prevention. In regard to cholera, the report advised the appointment and maintenance of medical officers of health at foreign ports, from which cholera may be brought, whose duty it shall be to inspect vessels bound to our ports, and give the requisite information, as to the existence or appearance of that disease, to the constituted authority in this country; a close alliance of our health authorities with those of the Dominion of Canada; the establishment and support of an inspection and quarantine service, like that inaugurated by the National Board of Health; aid of local boards by the General Government in the appropriation of necessary funds; the removal of local unsanitary conditions favorable to the development of cholera; isolation of first cases and destruction of infected materials; isolation of infected localities and towns, and intercourse with other towns under sanitary supervision.

Though the scheme embodies most of the precautions necessary to be taken to prevent a cholera epidemic, yet the plan lacks that continuity and coherence which a body embracing the foremost sanitary thinkers and workers of the United States ought to have formulated With the enemy three thousand miles away, and knowing precisely the route and the methods of its approach and invasion, a practical sanitarian ought to be able to state positively what steps must be taken to prevent, 1, the embarkation; 2, the transit; and, 3, the landing of this scourge on our shores. Evidently the first, and by far the most important duties in the scheme of prevention must be performed by the General Government, for it alone can regulate travel and traffic on the great ocean highways. The Association should not only have specifically stated what those duties are, but should have taken measures to ensure the necessary action of the Government. Cholera is not to be prevented by reports and proclamations, but by energetic work on the part of those who are appointed to protect the public health. To-day the obligation to prevent the introduction of cholera into this country rests solely with the National Government. No member of the Association doubts that, if the Government was thoroughly alive to its great responsibility and exercised its full power intelligently, it could prevent the importation of the germs of this or any other foreign pestilence. But will the Government act promptly, wisely, and effectively? That is the all-important question for the Association to determine, and if that body really intends to do more than put itself on record as proposing a few desultory and disconnected measures against the invasion of cholera, it has an immediate and pressing duty to perform. It should at once, through a competent committee, bring its intelligence and great influence to bear upon the Government, both in devising measures of prevention and aiding in their execution.

A step has been taken in the right direction by the State Boards of Health which, during the past week, held a Conference at Washington, reviewed the several questions involved in the scheme of prevention, and conferred with members of Congress and Government officials. This Conference did not, we believe, directly represent the Association, but stood alone as the representative of the State Boards of Health. The Association, therefore, has as yet taken no active steps to secure the adoption and enforcement of the measures of prevention which it recommended at St. Louis. Can it afford to remain idle during an epidemic of cholera with the mere statement of platitudes? We believe not. It has the necessary organization, through its executive and advisory committees, for immediate and aggressive work, and it will sadly come short of its duty and its high prerogatives if it does not become a potent factor in organizing and sustaining measures of defence. In this preliminary movement of the State Boards of Health, in holding a conference at Washington, the Association should have been represented, in order to aid in maturing those plans which it should co-operate in carrying into effect.

The Conference of State Boards found an anomalous condition of affairs at Washington, and sought to remedy it by preparing a bill to be submitted to Congress. This bill provides for the organization of a National Board of Health, to be composed of one representative from each existing State Board of Health. The remaining provisions of the bill are designed to render the board the efficient agent of the Government in the prevention of epidemics. The purposes of the Conference are good and commendable, though perhaps the objects sought might have been obtained more directly and immediately. Certainly we need—nay, must have—a National Board of Health competent to employ wisely and efficiently the powers of the General Government in the protection of the public health. But those who seek such legislation as the Conference contemplates should be well advised of the obstacles in their way, and the nature of the opposition which they will meet. There is already a National Board of Health, fully organized and equipped to perform all the functions which this bill imposes upon a new board. Let the Con-

ference inquire into the history of the defeat of this board and it will discover an agent in the Treasury Department hostile to all further health legislation, unless such legislation places under his control the public funds appropriated for sanitary purposes. We refer to the chief medical officer of the Marine Hospital Service. To this source must be referred whatever miscarriage there has been of proper support of the existing board by Congress, and it is from this source will come the secret influences which will tend powerfully to defeat all proper health legislation during the present session. In undertaking, therefore, to secure the favorable action of Congress on its bill the Conference must be prepared to encounter and overcome the opposition which a bureau, already in possession by artful intrigues of the funds and the power belonging to the existing board, can wield through the Treasury Department.

MORPHINISM DETECTED THROUGH THE EXAMINATION OF THE URINE.

MORPHIOMANIA has been growing so rapidly and withal so quietly in our country that its present proportions are hardly realized, even by the profession. It is not alone to the specialist, nor to the physician who has a home and a method for the cure of the opium-habit that the subject is of interest, the general practitioner may at any moment meet with cases of a more or less pronounced character.

The ruses resorted to by many patients to obtain their favorite drug, and the great facilities they have of secret indulgence, tend at times to mislead and render treatment unsatisfactory.

Again, in the therapy of ordinary diseases in morphine takers, our remedies may be counteracted or their effects modified to an extent incompatible with recovery. It may become important for us to discover, therefore, if the drug is being taken surreptitiously.

It has been claimed by many that morphia becomes so changed in the system that no traces of the alkaloid, as such, are to be found in the tissues or excretions. On the other hand, several observers hold an opposite view. On account of the diversity of opinion in competent observers and the practical significance of the entire subject, Dr. Notta has made some careful investigations, touching the elimination of morphia by the kidneys. He has published the results of his research in *L'Union Médicale*. At first he used Mayer's test, by the double iodide of potassium and mercury, then that of Bouchardat. Both of these proved unsatisfactory, giving positive results only where the daily quantity of urine was small.

Thus, Mayer's test gave a characteristic precipitate only when each quart of urine contained at least three grains of the alkaloid. Bouchardat's test gave reliable results when as little as one to two grains were present.

The author's own method, which he recommends as simple, exact, and rapid, is as follows:

Treat a quart of the suspected urine with subacetate of lead (1 to 10). The precipitate is a combination of the lead with the uric, phosphoric, and other acids existing in the urine and the coloring matters and the extractives.

The decolorized urine then contains the morphine combined with acetic acid, the substances not precipitable by the sub-acetate of lead, and the excess of the lead. Now filter and get rid of the lead by adding sulphuric acid (1 to 10), drop by drop until there is no further precipitate. Filter again, add an excess of ammonia and warm amylic alcohol and shake. The mixture soon becomes clear and holds in solution all the morphine previously in the urine. After this it is only necessary to shake this solution with water acidulated with sulphuric acid in order to obtain the morphia as a sulphate. This is decomposed with ammonia water and taken up again with amylic alcohol, and after evaporation we have the morphine, which can be tested with the usual tests.

The conclusions which Notta draws from his investigations are: that morphine is eliminated, in great part at least, by the kidneys, provided they are not diseased; that Mayer's or Bouchardat's tests can be employed after eliminating sugar and albumen, but that when these tests fail, the one here given, or some equally reliable one must be employed. That it is always possible to find the drug in the urine of an habitual morphine taker provided as much as $1\frac{2}{3}$ grain is taken per day.

Further experiments must be made to decide whether this test discovers morphine in such cases as acute poisoning, or if it is only reliable in such cases as were here tested, where the drug had been taken for a long time in large quantities.

THE COLLECTIVE INVESTIGATION RECORD OF THE BRITISH MEDICAL ASSOCIATION.

THE *Bristol Medico-chirurgical Journal* is not satisfied with the labors so far published by the British Collective Investigation Committee, and takes the promoters of the scheme severely to task. It makes some remarks, which strike us as being decidedly forcible, even if not altogether merited.

Referring to the second volume of this committee, which deals principally with pneumonia, and which has been previously noticed in our columns, it says:

"Probably no scheme for the advancement of medical science was ever started under more favorable auspices than this collective investigation one of the British Medical Association. Prominent leaders in the profession praised and promoted it on platform, paper, and committee in the metropolis; and emissaries of accredited talent and eloquence were sent into the provinces to preach to us this new gospel of scientific research. Everywhere their doctrines have been received with a chorus of assent. Questions in scientific medicine were to be answered by the overwhelming mass, and not by the unsupported individual; the untrustworthiness of individual labors in the closet was to be replaced by the generalized experiences of the practitioner in public; and the groping investigations of the medical theorist were to be supplemented, or rather replaced, by the accurate records of the practical worker, as figures, facts, and statistics. *Parturiunt montes, nascetur*—let us see what."

The *Journal* then shows that from the sum expended by the Association they had a right to expect some noteworthy contribution to medical knowledge. It then continues as follows:

"We have systematized for us, under various headings,

the reports of 1,065 cases. The first thing one naturally turns to is the trustworthiness of the reporters. The men who are most likely to give us satisfactory answers to the queries propounded are the various teachers in our medical schools, the physicians to our hospitals, the men whom, in consultation or general practice, we know to have most experience of the complaint and most knowledge of it. We have gone carefully over the names of those who have made the returns, and we have discovered among them scarcely one which, either from general reputation in these islands or from local reputation in our own district, deserves to be heard as of any authority. That our hospital and consulting physicians practically ignore these inquisitive cards there can be no doubt. The fact is patent to any one who looks. These are the men who see most of the disease, and know most of the subject, and who are most competent to give returns. Why do they ignore the queries? Do they distrust the process? We fear there is no other explanation possible. To begin with, therefore, it submits that those most competent to answer refuse to do so, and the trustworthiness of the report is thus, in the first place, weakened."

The practical outcome of the replies of all these practitioners, in the writer's own words, is this: "It is manifest that the lines of treatment are so various as not to permit of any value being attached to a comparison of mortality. Surely this is the classical mouse of the mountains in travail at last!"

In conclusion, the *Journal* thinks that polling impressions of its practitioners is not the way to promote science. "The variables and contingencies are so numerous and so important that they cannot, as in this instance, be ignored. To ignore these is to nullify the whole work. And even if the results of this questioning were to be quite trustworthy, drawn up, criticised, and tabulated by skilled observers, we fail to see what new truth this galloping over the surface of disease can bring forth. We have been galloping over disease for centuries, and the outcomes are abundant enough in myriads of works in a score of languages. We want nowadays to attack disease from the bottom. The work must be one of concentrated labor by the most penetrating intellects, with every opportunity to study disease at the bedside and in the laboratory, and not of vague recollections jotted down in the midst of other pursuits by the rank and file, and huddled into columns by committees. No doubt the Collective Investigation Committee will soon come to a natural and timely end; in the meantime we would express our regret that so much money of the British Medical Association, which might go to its excellent benevolent fund, should be expended on an undertaking so palpably useless as this one."

PRECOCIOUS CANCER OF THE STOMACH.

The difficulties that at times surround the diagnosis of cancer of the stomach are well known. When the symptoms are indistinct and the physical exploration unsatisfactory, cancer is sometimes excluded on account of the youth of the individual. For by common consent carcinoma of the stomach is regarded as of rare occurrence before the age of forty. Yet we are often enough surprised to find at an autopsy a gastric cancer, where no suspicion of the disease existed during the lifetime of the patient.

Dr. Mathieu, of Lyon, has recently made a special study of carcinoma of the stomach, as it occurs early in life.

From the literature of the subject he has collected twenty-seven cases, most of which were observed before the age of thirty. The author separates them into three groups.

The first comprises those cases in which a diagnosis was made of some entirely different disease. This happened nine times. The diagnosis of cirrhosis being made five times, cancer of the liver, aneurism of the aorta, tumor of the spleen, and pleurisy, each once.

The second group contains eight cases. Here the difficulty was located in the digestive tract, its cancerous nature, however, not being recognized. Pregnancy existed in four of the patients belonging to this group, and the persistent vomiting was regarded as that common to their condition. Only one patient had hæmatemesis, which came on shortly before death. The disease was put down as dyspepsia in one case, and in another as ulcer of the stomach.

The third group finally includes those cases in which a correct diagnosis was reached, the tumor being made out in every instance. It would appear, therefore, that two-thirds of these cases passed unrecognized, and were mistaken for diseases that had no connection with the digestive tract. The course of gastric cancer of early life is, according to Mathieu, rapidly fatal, characteristic cachexia is commonly absent, and hæmatemesis quite rare. It seems, therefore, that the disease does not fully conform to the usual type of cancer, as ordinarily seen later in life.

THE CLINICAL FORMS OF HEPATIC COLIC.

Among the painful affections of the abdominal viscera few are more distressing, and oftentimes difficult to relieve, than the various forms of hepatic colic.

Dr. Olive, of Paris, has recently made a study of hepatic colic, from a purely clinical standpoint, a review of which is published in the *Journal de Médecine*, October 18, 1884. Among the principal causes of hepatic colic he finds arthritism, with its various manifestations, such as obesity, diabetes, and calculus; forced repose, sadness, sedentary occupations, abuse of alcohol, a diet too exclusively animal or fatty, and different chronic affections of the liver also invite colic.

The immediate determining causes are those which produce violent jars to the abdominal organs, such as horseback riding, the jolting of vehicles, and the like.

The author describes a form of colic which he terms pseudo-gastralgic-hepatic colic, which he differentiates from gastralgia by the following characteristics:

The patient suffering from gastralgia has more frequent pains, and would not go for three or four months without suffering, as the pseudo-gastralgic patient often does. Gastralgia causes distress when the stomach is empty, and at or just after a meal. The time for pseudo-gastralgia to appear is usually about two hours after eating.

The pains come on suddenly in hepatic colic, less so in gastralgia. They radiate toward the shoulder in hepatic colic, but not in gastralgia.

Still there may be a reflex intercostal neuralgia accompanying the latter affection. After hepatic colic, even without icterus, the urine is commonly red, and contains biliary pigment. This is never the case in gastralgia pure and simple.

FURTHER PATHOLOGICAL AND THERAPEUTICAL CONTRIBUTIONS TO CHOLERA.

The number of contributions to the subject of cholera is increasing rather faster than they can be recorded. Professor B. Grassi, in the *Gazz. degli Ospitali*, states that he has found the comma-bacilli in the stools of persons suffering from choleraic diarrhœa, or cholerine. The patient whose dejecta was examined was a soldier in a regiment of which some members had been attacked with cholera. Professor Grassi, together with Drs. Vivanti and Berretta, added to the number of bacilli repasts by swallowing dried cholera-bacilli. They experienced no ill effects. Professor Grassi believes that flies are active and important agents in spreading cholera. Professor Cantani, in the same journal, reports the results of some of his examinations of the blood in cholera patients. He finds that with the progress of the disease the blood lessens in alkalinity and finally at death is actually acid. He infers from this fact (which was known before) that if venous injections be made in treating the disease the liquid used ought to be more alkaline than that hitherto employed.

Dr. Manfredi has studied the action of tannic acid upon cholera-bacilli and finds that even in small amounts it kills them. He therefore recommends the rectal injection of solutions of this drug. Cantani recommends the same method and gives the following formula :

℞. Aq. catid.....	2000	grammes.
Acid. tannic	5-6-10	"
Gum arab.....	50	"
Tr. opii.....	30-50	gtt.

M.

Professor Alberta Riva, as the result of experiments upon animals, thinks that saline injections made into the pleural cavity, or preferably into the peritoneal cavity, may be beneficial in cholera.

Dr. Panier, in *El Siglo Medico*, recommends the heroic use of strychnine throughout the whole course of cholera. He gives hourly about gr. $\frac{1}{60}$ of sulphate of strychnia. MM. Huchard and Dujardin-Beaumetz recommend the hypodermic injection of caffeine dissolved in a solution of benzoate of soda. The dose given is about gr. jss.

Le Progrès Médicale quotes the results of the treatment of cholera with injections of chloral hydrate by Dr. Reddié, of Partabgark, India. He employed injections of small doses of chloral hydrate. Thirty-five per cent. of his cases died, while under other treatment the mortality was sixty-four per cent.

The Last New Antipyretic is thallin, and it has been introduced by Dr. V. Jaksch, of Vienna. It is one of the chinolin compounds, and is a powerful antifermentative. Jaksch has used it in eighty-six cases, and found that, although a powerful antipyretic, it is by no means a specific.

News of the Week.

The Biological Department of the University of Pennsylvania was formally opened on the 4th instant by Provost William Pepper. Addresses were made by Drs. Harrison Allen and Joseph Leidy.

The State Board of Lunacy of Pennsylvania have been diligently investigating the condition of the State Asylums since August last. As a result, says the *Medical Times*, they have been able to report to the State Board eighteen cases of alleged improper treatment which they had investigated, in some of which gross neglect and wanton cruelty had been practised. Several of these have been already removed to State hospitals, and new cases are constantly coming to light.

Death of Dr. Henry Gibbons.—We regret to announce the death of Dr. Henry Gibbons, of San Francisco, Cal., in the seventy-sixth year of his age. Dr. Gibbons was born in Wilmington, Del. He graduated in medicine from the University of Pennsylvania, in 1829. In 1850 he moved to San Francisco. He established and successfully conducted the *Pacific Medical and Surgical Journal*. He was also one of the founders of and teachers in the Medical College of the Pacific. He was a member of the Society of Friends.

The Bacillus of Syphilis.—Dr. Sigmund Lustgarten, describes a "specific bacillus of syphilis" (*Wiener Medicin. Wochen.*, No. 47, 1884) which he has discovered in the initial lesions and in gummata of syphilis. It is of about the same size and appearance as the tubercle bacillus and lies in small groups enclosed in the somewhat swollen lymphoid cells. The organism is distinguished from other bacilli by its staining and peculiar grouping. The investigations of previous discoverers of syphilis-germs are characterized as being "tinctured with grave errors."

The Death of Dr. James G. Thomas, of Savannah, Ga., recently occurred under unusually painful circumstances. Dr. Thomas was a member of the Executive Committee of the Ninth International Congress. He took a deep interest in the success of the Congress, and, at a considerable sacrifice, came to Washington, November 29th, to attend the meeting for organization. While on the way he was seized with a violent chill, and on his arrival at once took to his bed, from which he never again arose, the disease proving to be acute lobar pneumonia. He may be said to have lost his life in the service of the Congress, and it is an irreparable loss to the Executive Committee, as well as to his bereaved family and his fellow-citizens of Savannah and of Georgia.

Importation of Rags.—The Treasury Department has decided that no old rags shall be landed in the United States except upon disinfection by one of the following processes : 1. Boiling in water for two hours under a pressure of fifty pounds per square inch. 2. Boiling in water for four hours without pressure. 3. Subjection to the action of confined sulphurous-acid gas for six hours, burning one and a half or two pounds roll brimstone in each 1,000 cubic feet of space, with the rags well scattered upon racks. 4. Disinfection in the bale by means

of perforated screws or tubes through which sulphur dioxide, or superheated steam at a temperature of not less than 350 degrees, shall be forced under a pressure of four atmospheres for a period sufficient to insure thorough disinfection.

The Presbyterian Hospital.—A lady has promised to give $50,000 to the Presbyterian Hospital for the purpose of erecting a new wing, provided an equal sum is raised by other parties.

Trained Nurses for the Insane.—A special committee of the State Charities Aid Association has prepared a report upon the training of nurses for the insane. The committee has secured the co-operation of the Bellevue Training School, and is now occupied in maturing a plan by which a certain number of women trained there as nurses for the sick may secure in one of our lunatic asylums a special training in the care of the insane.

Deaths of Foreign Medical Men.—The past few weeks has witnessed the death of a number of prominent European medical men. In France we have chronicled the death of M. Fauvel, the distinguished Vice-president of the Académie de Médecine. We learn that Professor Fonssagrives, of the Montpellier Faculty of Medicine has recently died of cholera. In Germany, the deaths are announced of Professor v. Wittich, of Königsberg, and Professor K. v. Vierordt, of Tübingen. Professor Kolbe, of Leipzig, and Professor Chvostek, of Vienna, also recently died.

Medical Diplomas in Australia.—A physician of Pictou, N. S. W., has been refused a license to practise because, although he had a degree of M.D., granted by the University *of Philadelphia*, yet it only certified to his studying for three years. The authorities as well as the medical journals make the mistake of thinking that the degree and the University are all right.

Gift to a German Hospital.—The German Hospital of Philadelphia has recently been enlarged and greatly improved. The sum of $600,000, which covers the expense of the changes, was given to the hospital by Mr. John D. Lakenau, President of the Board of Trustees.

Hayem's Formula for Intra-Venous Injection in Cholera :

Aquæ distillat.....	1 litre.
Sodii chlorid. pur.....	5 grammes.
Sodii sulphat. pur.....	10 grammes.

M. Filter and give two to two and a half litres at a temperature of 38° C. The time occupied in giving is twelve to fifteen minutes.

Dr. Louis H. Steiner has just been elected librarian of the new Pratt Free Library in Baltimore, which has been completed at a cost of $1,000,000.

Death During a Foot-ball Match.—Another death is recorded as occurring at a foot-ball match between students of St. Thomas' Hospital, London. The victim was a young man, aged twenty-three, who, while in the midst of the game, suddenly staggered and fell down dead.

The Rabbeth Memorial.—A thousand dollars have already been collected for this purpose.

Dr. Jay Owens retires from the editorship of the *Northwestern Lancet*. He is succeeded by Dr. C. B. Witherle.

The Loneliest Doctor in the World is the ophthalmologist who hasn't written an article on cocaine.

The Use of Iodide of Potassium in Large Doses.—Dr. W. C. Dabney, of Charlottesville, Va., calls our attention to a clinical lecture by Charcot, published in *Le Progrès Médical* for January 13, 1877, and showing that Charcot had used potassium iodide in doses of six to ten grammes daily since 1874.

Ovariotomy in Rome.—Dr. J. H. Thompson, of Rome, Italy, sends us the records of a case of ovariotomy performed by himself recently, and regarding which there were several points of more than ordinary interest. He writes: "Ovariotomy in Rome has generally been unsuccessful, I think owing to the fact that it has mostly been performed in hospitals which were built in the fifteenth century (persons who had the ability to pay for home attention generally preferring to go to London). These old buildings cannot be made aseptic." This case was operated upon in a specially provided apartment. It was complicated with pregnancy. We regret that the report is too long for publication by us.

THE TEXT OF THE NEW HEALTH BILL.

The following is the text of the new Health Bill, prepared by the National Conference of State Boards of Health, now before Congress :

To amend an Act entitled "An Act to prevent the introduction of contagious and infectious diseases into the United States and to establish a National Board of Health."

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That an Act entitled, "An Act to prevent the introduction of contagious and infectious diseases into the United States and to establish a National Board of Health," approved March 3, 1879, be so amended as to provide that there shall be established a National Board of Health, to consist of one member from each State Board of Health now established, or which may be hereafter established in the United States, to be appointed by the President and confirmed by the Senate, whose compensation, when actually engaged in the performance of duty under this act, shall be ten dollars per diem each, and reasonable expenses. This board shall meet in Washington within ninety days after the passage of this Act, and shall meet in Washington annually, and in case of emergency upon the call of its chairman and secretary, or upon the extraordinary call of the President of the United States, as hereinafter provided.

The officers of this board shall be a chairman and secretary. The secretary shall be the executive officer of and ex-officio a member of the board, and shall devote his entire time to the duties of the office, and may be removed for cause, at any regular meeting of the board, two-thirds of the full board voting therefor, and shall receive such salary as may be determined by the board. The chairman with six other members, representing the various geographical divisions of the country, shall constitute the executive committee of the board, to be elected at the first meeting of the board, and at each annual meeting thereafter, and said committee shall, and is hereby authorized to exercise such powers as may from time to time be conferred upon it by the board.

Section 2. The duties of this board shall be, and it is

hereby authorized and given power to make or cause to be made, such investigations at any place within the United States, or at any foreign port or place, and to collect information upon all matters relating to the public health, and to frame such rules and regulations as may be necessary for the government of the quarantine service of the United States; and all the power and authority now provided by law, or which may be provided by law, for the control and protection of the public health of the United States, shall be and are hereby vested in said board, except as to the special authority vested in the President of the United States under the provisions of this act. The rules and regulations of this board shall severally be executed, under the direction of this board, through such Departments of the Government, or other officers, as the law may prescribe or the President may designate.

This board shall co-operate with, and so far as it lawfully may, shall aid State and local boards of health in the enforcement of the rules and regulations of such boards, to prevent the entroduction of contagious and infectious diseases from foreign countries into the United States, and into one State from another.

SECTION 3. It shall be the duty of this board to make such rules and regulations as are necessary to be observed by vessels at ports of departure, where such vessels sail from any foreign port or place to any port or place in the United States, to secure the best sanitary condition of such vessel, her cargo, passengers, and crew, and to prepare from time to time for the consular officers of the United States, and for the medical officers serving under this act at any foreign port, and otherwise make publicly known such rules and regulations, which, when approved by the President and issued by the Department of State, and posted in the office of the consul or other representatives of the United States at such foreign ports for at least ten days, shall be enforced by the consular officers and agents of the United States.

SECTION 4. It shall be unlawful for any vessel from any foreign port or place to enter any port in the United States, except in accordance with the rules and regulations made in pursuance of this act, and of the rules and regulations made under State or municipal authority, and any such vessel which shall attempt to enter any port of the United States in violation thereof, shall be liable to process in the proper district court of the United States, and upon conviction, shall forfeit to the United States a sum to be awarded in the discretion of the court, not exceeding $1,000, which shall be a lien upon such vessel, to be recovered upon proceeding in the proper district court of the United States, in accordance with the rules and laws governing cases of seizure of vessels for violation of the revenue laws, and in all such cases the United States Attorney for such district shall appear on behalf of the United States; and all such vessels shall obtain from the consular or authorized medical officer at the port of departure a certificate in duplicate, setting forth the sanitary history of said vessel, and that it has in all respects complied with the rules and regulations of this board, made in pursuance of this act for the government of such vessels, and before granting such certificate such consular or medical officer is required to be satisfied that the statements therein made are true; and upon the request of this board, the President of the United States is hereby authorized to appoint proper medical officers, to serve in the offices of the consuls at any such foreign ports, to make the inspections and give the certificates herein required.

SECTION 5. Such vessels shall observe all rules and regulations made by this board in pursuance of this act, in regard to the inspection, disinfection, and isolation of the same, upon its arrival at any port in the United States, and for the treatment of persons and cargo on board, so as to prevent the introduction of contagious diseases into the United States, and it shall be unlawful for any vessel to enter such port, to land its passengers or discharge its cargo, except upon a certificate from the health officer of such port, that such rules and regulations have in all respects been complied with.

SECTION 6. In the event of any sudden emergency, threatening the importation of contagious or infectious disease into the United States from any foreign country, the President of the United States is hereby authorized and required, in his discretion, to adopt and make known forthwith by public proclamation, such measures as may meet the emergency, either by suspending the introduction into the United States by land or sea, of any specific merchandise calculated to be a vehicle for the communication of contagion, or by prohibiting the entry into the ports of the United States of vessels coming from infected countries or having contagious or infectious disease on board. And in case the President shall at any time exercise the authority hereby conferred upon him, he shall, at or before the time of issuing such proclamation as aforesaid, convene the National Board of Health, to meet at Washington in special session within ten days from the date of such notice of convention, and the said board shall thereupon advise such measures as it may deem sufficient to meet the emergency; and upon the taking effect of such measures, with the approval of the President of the United States as herein provided, the President's proclamation aforesaid shall cease to have effect. It shall be the duty of this Board at all times to give prompt attention to any question in sanitary science which may be submitted to it by the President.

SECTION 7. It shall be the duty of the Department of State to obtain from the consular officers at foreign ports or places all available information in regard to the sanitary condition of such ports and places, and to transmit the same to this board; and it shall be the duty of this board to obtain from the State and municipal health authorities throughout the United States, and from all other available sources, weekly reports of the sanitary condition of ports and places within the United States, and reports and other matters relating to climatic and other conditions affecting the public health, and it shall prepare, publish, and transmit to State and other authorities, and other proper persons, weekly abstracts of such reports, consular reports, and other useful information relating to the public health; and it shall make to the President, for transmission to Congress, an annual report of its transactions, with such recommendations as it may deem important to the public health; and the necessary printing of the board shall be done at the Government Printing Office, upon the requisition of the secretary of such board, in the same manner and subject to the same provisions as other public printing for the several Departments of the Government.

SECTION 8. The President of the United States is authorized, when requested by this board, and when the same can be done without prejudice to the public service, to detail officers from the several Departments of the Government, for temporary duty, to act under the direction of this board in carrying out the provisions of this act, and such officers shall receive no additional compensation, except for actual and necessary expenses incurred in the performance of such duties.

SECTION 9. To meet the expenses incurred in carrying out the provisions of this act, the sum of $500,000, or so much thereof as may be necessary, is hereby appropriated, to be disbursed under the direction of the board; and the board shall have authority to appoint such disbursing agents as it deems necessary, who shall give bond, as in other cases, for the faithful performance of their duties.

SECTION 10. All acts and parts of acts in conflict with any of the provisions of this act shall be and are hereby repealed.

EXONERATED.—We are pleased to state that the physicians who were censured by the Coroner in the Jaeger case have been fully exonerated. Thus ends what might have proved to have been a professional scandal.]

Reviews and Notices.

THE PRINCIPLES AND PRACTICE OF GYNECOLOGY. By THOMAS ADDIS EMMET, M.D., LL.D., etc. Third edition, thoroughly revised. With 150 illustrations. Philadelphia: Henry C. Lea's Sons & Co. 1884.

THE originality and amplitude of resource which characterize the operative procedures of the author are faithfully mirrored in the goodly volume before us.

The first and second editions of this book are so well known to the profession that it would be an act of supererogation to enter into a discussion of the merits of the third edition, were the latter merely a reprint of the former. We have essentially an almost new work before us.

Honesty of purpose, truthfulness of clinical description, love of his art, tempered by judicious fairness—these qualities speak in every chapter of the book. It is seldom that the personal character of an author is so correctly reflected as we find it in Dr. Emmet's writings. To read his description of cases and commentaries is almost equivalent to seeing, hearing, and knowing him. Those who enjoy the latter privilege are satisfied that the teachings of our author are based upon sincere conviction, deduced from an ample clinical material. If some of these teachings are at variance with the accepted views of the majority of gynecologists, it behooves the latter to bear in mind the character of the author as a man and physician, and to study with more than usual care the new doctrines and operative measures which he propounds with all the earnestness of his nature. Dr. Emmet simplifies the treatment of diseases of women materially in that he not only asserts "that pelvic cellulitis is by far the most important disease with which woman is afflicted," but that he refuses to recognize the distinctions usually made by authors between the various inflammatory conditions in the vicinity of the uterus. "The terms perimetritis and parametritis are not applicable, as they express a theoretical distinction only, and the difference cannot be recognized clinically." These dicta mark a decided departure from established doctrine and raise Dr. Emmet to the dignity of founding a new school in gynecology. Without entering into the argument, chiefly clinical, by means of which he seeks to establish these radical views, it may be granted that, if the generalization of utero-pelvic inflammation does not accrue to the detriment of patients suffering from these diseases, we cannot demur with justice. A fine analytical diagnosis is "a thing of beauty," but it is not "a joy forever" if it conduce not to the recovery of the patient. In this respect the aim of science is fulfilled by Dr. Emmet's classification. The management of these cases is greatly simplified, and its success is vouched for by the logic of facts. The clinical history of cellulitis, its etiology and treatment, are drawn with a master pen; but nowhere in this volume does the author's cautious attention to minute details, which is the key to his success, appear more pronounced than in the enunciation of the lines of treatment. Prolonged hot water injections in the early stage, and less abundant injections continued in the later stages, are the chief reliance.

The question arises: Will Dr. Emmet's radical views on cellulitis as a fundamental agency in uterine troubles be accepted by the profession? Our answer is, that these views have already received practical indorsement, and are thus daily accepted by every gynecologist, when he prescribes hot-water injections. That the latter is the most universal remedy in uterine disease, is a well-recognized fact. Its recommendation by Dr. Emmet rapidly introduced it; its success, as a chief or auxiliary measure, has maintained its position. It is Dr. Emmet's chief remedy in all shades of cellulitis, and he has thus ingeniously, perhaps unintentionally, brought the profession to a recognition of the correctness of his views in the most practical manner.

One of the distinguishing features of the present edition of the work, is the fact that several new operations are described, one of which, at least, is destined to win for itself a lasting place among restorative procedures in plastic gynecology. This is, we believe, true of Dr. Emmet's new operation for restoration of the posterior wall of the vagina in the "so-called rupture of the perineum." The author claims that it is "exceedingly doubtful if the perineum can be lacerated without the tear extending through the sphincter ani." He recognizes the latter alone as a true rupture of the perineum, for which the well-known operation, described in former editions, is still recommended. The larger number of "perineal lacerations," however, are "due to overstretching of the pelvic fascia, or to laceration at some point of fascia and muscle." To remedy the damage inflicted by this complication of labor, Dr. Emmet gives the profession a new operation which appears to be perfect in its immediate result, viz., the restoration of the normal configuration and dimensions of the vagina. Upon this point we speak from actual observation. We find the new operation not difficult of execution, and the claim that it contributes to the diminution of pain in the period of healing, seems to be substantiated. It is to be regretted, however, that it will be difficult to comprehend the steps of this operative procedure from the illustrations in the book. Two additional diagrams, viz., one representing the process of denudation in its proper line, and another showing by dotted lines wherein the new operation differs from and is superior to the old operation, would materially facilitate its comprehension. It is to be hoped that in the next edition, if not in a separate paper, Dr. Emmet will favor the profession with a drawing which will be as superior to Fig. 67, in the delineation of the new operation for restoration of the posterior vaginal wall, as is Fig. 89 of the last edition superior to Fig. 83 of the first, in the illustration of the operation for lacerated cervix.

The new operation, when finished, leaves the vagina in an almost virginal state, with the fourchette sloping inward, while the old operation builds a dam in front of the vagina, which sooner or later yields in many cases. If space permitted, we would be glad to enter into a more detailed discussion and description of this operation, as we have seen it under the hands of its skilful designer.

Another decided advance brought prominently forward in Dr. Emmet's last edition, but foreshadowed in the second, is the "button-hole operation" for the relief of those distressing urethral and bladder troubles which are the bane of many a woman's life, and the despair of many a doctor. The illustration of this operation is simply perfect, as is also the description of the steps of, and the indications for, its performance. The author claims more for it than we would at the present time be willing to admit. But there is no doubt that the great benefits which this ingenious procedure opens out in hitherto incurable cases, will very soon be appreciated. The beautiful imitation of the ordinary button-hole, which prevents irritation of the wound edges, together with the fact that incontinence of urine does not result from the mutilation of the urethra, mark this procedure as one of the most brilliant achievements of surgery.

The recognition of cellulitis as a dominant element in gynecic troubles; the introduction of hot-water douches for their treatment; the operation for lacerated cervix; the button-hole operation in urethra and bladder; the ingenious and effective operation for repair of injuries in the posterior vaginal wall—these original and practical contributions form a pedestal upon which Dr. Emmet's fame must securely rest. If his fertile brain and skilful hand furnish naught else to the profession but these, he may be content in the knowledge that he has created an era in practical gynecology to whose opening future generations of physicians will ever turn with reverence and gratitude.

We have dwelt briefly upon the chief distinguishing characteristics of this third edition of Dr. Emmet's work, and we have, therefore, been forced to omit mention of many valuable features. Altogether, the work before us is an inexhaustible fountain of clinical information, which no practitioner who has the interest of his clientèle at heart can afford to miss from his library. Its practical teachings render it indispensable to the general practitioner, while its novel views and operations commend it to the progressive gynecologist. It is almost a new book, for, as the author tells us, "The chapters on The Relation of Education and Social Condition to Development; those on Pelvic Cellulitis; on the Diseases of the Ovary; on Ovariotomy, and on Stone in the Bladder, have been nearly rewritten. The chapters on Prolapse of the Vaginal Walls; on Laceration of the Vaginal Outlet and through the Sphincter and Perineum; on the Methods of Partial and Complete Removal of the Uterus for Malignant Disease; on the Surgical Treatment of Fibrous Tumors; on Diseases of the Fallopian Tubes; and on Diseases of the Urethra, are essentially new, containing the views and experience of the author in a form which has not been presented to the profession before."

The type is clear, although somewhat condensed to make room for additional matter; the illustrations in the main are good.

The Formation of Poisons by Micro-organisms. By G. V. Black, M.D., D.D.S. 8vo, pp. 178. Philadelphia: P. Blakiston, Son & Co. 1884.

The author of this little work possesses in an unusual degree the faculty of seizing the main points of an argument and presenting them clearly and forcibly. He lays no claim to originality in his facts, and if he has made any investigations of his own on the subject, he does not obtrude them in his book, but gives the history and present standing of the subject in a concise and yet comprehensive manner, such as no other work with which we are acquainted furnishes. That part of the treatise in which he endeavors to explain the *modus operandi* of the bacteria and their congeners by the poisonous effects of their waste products is a truly delightful piece of logical reasoning, and will do much to enable the reader to obtain an understanding of the deadly work of the micro-organisms. The author argues *à priori* by analogy, and having, by a general consideration of the laws of digestion and assimilation, made out a probability for his theory, he proceeds to substantiate it by the facts as far as known. We have no hesitation in pronouncing it the best book for students, physicians, and scientists, who desire to have in a clear and condensed form a knowledge and understanding of the germ theory of disease.

A Pharmacopœia for the Treatment of Diseases of the Larynx, Pharynx, and Nasal Passages. By G. M. Lefferts, A.M., M.D. Second Edition, Revised and Enlarged. New York and London: G. P. Putnam's Sons. 1884.

Dr. Lefferts' little volume forms a convenient collection of the commoner formulæ requisite for treating the diseases of the upper air-passages. It is a work that the general practitioner will at times consult with profit to himself and his patients.

The Ear: Its Anatomy, Physiology, and Diseases. A Practical Treatise for the Use of Medical Students and Practitioners. By Charles H. Burnett, A.M., M.D. With One Hundred and Seven Illustrations. Second Edition, Revised and Rewritten. Pp. 585. Philadelphia: Henry C. Lea's Son & Co. 1884.

Seven years have elapsed since the publication of the first edition of this work; in this time the advances in the science of otology have been rapid and of an eminently practical character, so that in the work of revision for this second edition of the treatise the author found many alterations necessary; portions of the book had to be entirely rewritten, whilst much material found to be obsolete was omitted.

Dr. Burnett seems to have entered on the laborious task of giving the profession a complete treatise on the ear at a most auspicious moment, since he brings to the work a ripe experience both as practitioner and writer; and by acknowledging his indebtedness to both the valuable contributions of his American *confrères*, and of the accumulated knowledge of German, English, French, and other laborers in the field of otology the conceit of writing a book merely from the narrow standpoint of individual experience is notably absent.

The author informs us in the preface that special attention has been given in the present edition to the following subjects, namely: the abnormalities of the auricle, otomycosis, the treatment of aural polypi, and the diagnosis, etiology, and treatment of aural vertigo. The work is divided into sections as follows:

Part I.—Anatomy and physiology of the external ear, comprising the auricle, the external auditory canal, and the membrana tympani. The middle ear: The tympanic cavity, the Eustachian tube, and mastoid portion. The internal ear: The labyrinth and auditory nerve, and scheme of relationship between the middle and internal ear.

Part II.—The examination of patients, the necessary instruments and their employment, the consideration of sound, hearing, and tests of the latter, organic defects of the auricle, and its cutaneous affections, including morbid growths and injuries, diseases of the external auditory canal, foreign bodies in the external ear, and the results of inflammation and injury, affections of the membrana tympani, including acute and chronic inflammation, injuries and morbid growths.

Under the section devoted to the middle ear are considered acute and chronic catarrhal inflammation of the middle ear and their treatment, functional disturbances, noises in the head, etc., and organic disturbances. Chapters are assigned to acute and purulent inflammation of the middle ear, their course and consequences.

Section VI. is devoted to diseases of the internal ear, and Section VII. to deaf-mutes, and partially deaf children, the methods of their relief and education.

While the otologist might differ from the author in many minor points of theory and practice, the student and practitioner will find this work fully up to the present time in all of the subjects of which it treats, and a safe guide to follow in practice. The various topics pertaining to otology have been handled with unwearied zeal and patience; indeed the literature of the subject has been so exhaustively brought forth that the reviewer is at a loss to know just where to take up the thread of the text for practical criticism. Perhaps it might be said the author has introduced some instruments for the examination of the ear which cannot be practically adopted by the specialist even; but, after all, this has a certain interest as showing what efforts have been made to increase our means of finding out more about the diseases of the ear. The author adheres to the employment of the hard-rubber nose-piece in inflation of the tympanum by means of the air-bag; this appliance has long fallen into disuse in New York, where a glass bulb is used to close up the meatus of one nostril, a method less disagreeable to the patient and more cleanly than the insertion of a long slender tube into the nose. The above are trivial matters, after all, and one would scarcely be warranted in taking up further space in an analytical examination of all the points of interest, since the work is likely soon to be in the hands of every one interested in the subject.

Otologists must thank Dr. Burnett for taking a step in advance in the matter of aural nomenclature, and, although there is yet some room left for improvement in this respect, he has left a better state of things than previously existed. The book is well made up, and the illustrations are good in the main; the economy of the publishers, however, in producing inferior pictures o,

the human face, as shown in the explanatory cuts, cannot be commended.

On the whole this treatise will be an invaluable acquisition to the library of the American practitioner; the subjects are conveniently arranged for reference, and the index will be found unusually complete.

THE PHYSICIAN'S VISITING LIST FOR 1885. Philadelphia: P. Blakiston, Son & Co.

THIS popular visiting list appears in its thirty-fourth year. There are no changes in the plan of its arrangement.

MICRO-ORGANISMS AND DISEASE. By E. KLEIN, M.D., F.R.S. London: Macmillan & Co. 1884.

THIS little volume is a reprint of a series of articles that were published in the *London Practitioner*. It is by no means a complete treatise, but may serve as a convenient introduction to the study of microbes in their relation to disease.

A TEXT-BOOK OF PATHOLOGICAL ANATOMY AND PATHOGENESIS. By ERNEST ZIEGLER. Translated and Edited for English Students by DONALD MACALISTER, M.A., M.B. Part II. Special Pathological Anatomy, Sections 1–8. Pp. 365. New York: William Wood & Co. 1884. Wood's Library of Standard Medical Authors.

THE editor and translator of this work, Dr. MacAlister, states that he had expected to make the present volume the concluding one. Owing to the great demand for the first sections, however, Professor Ziegler was unable to complete his work as early as expected. The present volume does not, therefore, finish the work. It takes up the various branches of special pathology, beginning with blood and lymph and ending with the alimentary tract and the liver and pancreas. The kidneys, lungs, and nervous system remain yet to be treated of.

We can hardly praise too highly this volume. It treats every branch of the subject with a most satisfactory completeness, yet it is not prolix, nor does it deal in hypotheses or superfluous discussion. Numerous bibliographical references are given. The illustrations are excellent and vastly superior to what we are accustomed to find in this series. The work when completed will take its place as the best pathological text-book in the English language.

THE ELEMENTS OF PHYSIOLOGICAL AND PATHOLOGICAL CHEMISTRY: A Handbook for Medical Students and Practitioners, containing a general account of Nutrition, Foods, and Digestion, and the Chemistry of the Tissues, Organs, Secretions, and Excretions of the Body in Health and Disease, together with Methods of Preparing or Separating their Chief Constituents, as also for their Examination in Detail, and an Outline Syllabus of a Practical Course of Instruction for Students. By T. CRANSTOUN CHARLES, M.D. Illustrated with 38 engravings on wood and a chromo-lithograph. 8vo, pp. 463. Philadelphia: Henry C. Lea's Son & Co. 1884.

THE very ample title-page which is given above gives so full an idea of the scope of the author's work that an analytical review is hardly necessary. Dr. Charles, as his title-page would almost indicate, is fully impressed with the importance and practical reach of his book. A perusal of its contents, or rather of selected portions thereof, shows that the author's confidence in himself is not misplaced, and that he has not only got hold of an important branch of medical science, but has treated it in a competent and instructive manner. The physician, however, must be impressed, in reading this as well as many other of the works that are pouring so rapidly from the medical press, that his work of acquiring knowledge is never done, and that the fields in which he can and perhaps ought to acquire technical skill are rapidly multiplying. If he chooses to take up physiological and pathological chemistry we cannot recommend a better work than the present. In fact it fills a gap in medical text-books, and that is a thing which can be rarely said nowadays.

Physiological chemistry generally means in practice urinary analysis. In accordance with this fact, Dr. Charles has devoted much space to the elucidation of urinary mysteries. He does this with much detail, and yet in a practical and intelligible manner. In fact, the author has filled his book with many practical hints, as well as with recondite formulæ and complicated reactions. It is needless to say that the volume is published in the best style.

ON SCLEROSIS OF THE SPINAL CORD: Including Locomotor Ataxia, Spastic Spinal Paralysis, and other System Diseases of the Spinal Cord, their Pathology, Symptoms, Diagnosis, and Treatment. By JULIUS ALTHAUS, M.D., M.R.C.P. With nine engravings, pp. 394. New York: G. P. Putnam's Sons. 1885.

THE physician in general practice is doubtless sometimes a little puzzled at the extradorinary amount of attention bestowed upon locomotor ataxia by neurologists. It is a rare disease. Among a million of people only two or three die from it annually, and the country practitioner sees only two or three cases in as many decades. But tabes dorsalis is, scientifically, a most interesting affair, and, practically, when it does occur it means years of distress and agony to the patient. No one will find fault, therefore, at the attempts to secure more knowledge of its nature and more skill in its treatment. Dr. Althaus' book is really a treatise on locomotor ataxia, with a few chapters on the other scleroses added for completeness. It embodies some of the articles that have already appeared in English medical journals. Taken altogether, it is a most interesting and practical contribution to the subject. The author is of the opinion that a great deal can be done for tabes if taken early, and he is especially earnest in urging that the general practitioner be made familiar with the premonitory symptoms of the disease.

Dr. Althaus believes thoroughly in the great importance which syphilis plays in the etiology of the disease. For this reason he makes iodide of potassium a prominent drug in his armamentarium. He commends ergot and electricity highly. Nitrate of silver is spoken of with more caution.

The book is written in a plain and non-technical style, and will be found attractive and instructive by all classes of medical men.

HENKE'S ATLAS OF SURGICAL ANATOMY. Translated and Edited by W. A. ROTHACKER, M.D., Pathologist to the Cincinnati Hospital and Lecturer on Pathological Anatomy in Miami Medical College. 4to, with 81 plates and 123 figures. Cincinnati: A. E. Wilde & Co. 1884.

THE well-known German Atlas of Henke, on regional and surgical anatomy, has now for the first time been reproduced in this country. It comes to us in a form worthy of the original, the acknowledged excellence of which has rendered changes and additions unnecessary. As the American editor implies in his preface, it is essentially a working Atlas, and will be found valuable by the busy practitioner, as a convenient book of anatomical and surgical reference.

TREATMENT OF DISEASES OF WOMEN, PUERPERAL AND NON-PUERPERAL. By CHARLES H. GOODWIN, M.D. Second Edition. New York: C. H. Goodwin. 1884.

A SECOND edition of Dr. Goodwin's Treatment of Diseases of Women has just appeared. The work, it is stated, has been revised, but differs in no material respect from its first issue. It is a compilation of the late views of many of New York's most eminent obstetricians and gynecologists, and as such commends itself to those who have either not the time to read these various writers *in extenso* or to whom their original contributions are inaccessible. We cannot commend it too highly.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

SECTION IN OBSTETRICS.

Stated Meeting, November 28th, 1884.

ALEXANDER S. HUNTER, M.D., CHAIRMAN.

ANTEFLEXION OF THE UTERUS AND ITS ASSOCIATED PATHOLOGICAL CONDITIONS—THEIR PREVENTION AND TREATMENT.

DR. W. GILL WYLIE read a paper on the above subject, which was the continuation of a paper previously published in the *American Journal of Obstetries*. The present paper referred especially to the prevention and treatment of anteflexion.

Prevention.—The true etiology of the disease indicates the steps to be taken to prevent it. As long as delicate children are born and are able to reach maturity, women will suffer with small, imperfectly formed and degenerated genital organs. We might expect to find anteflexed uteri among these children, although born of healthy parents. To prevent anteflexion or imperfect development and degeneration of the generative organs children with good constitutions should be kept in good health until fully matured, and delicate and stunted children should be so treated as to increase their physical strength and have a surplus force for the development of the organs of generation.

Local treatment, if given at all, should aim at stimulating healthy development.

Treatment.—These cases usually seek medical advice on account of dysmenorrhœa or irregular menstruation. Yet not unfrequently a woman will bear with the pain for years, and finally consult a physician for sterility.

Dr. Wylie rarely makes a local examination in unmarried women for either dysmenorrhœa or amenorrhœa without first trying the effect of general treatment. By far the most common type among the well-to-do classes is that where imperfect development is plainly indicated. In Sims' position, with his speculum in place, a properly curved sound can be readily passed to the os internum; at this point there may be some resistance, and as the instrument passes the patient usually complains of sharp pain. The fundus may be found sensitive to the touch of the sound, and not unfrequently its withdrawal is followed by blood, although it may have been passed with the greatest care. He usually begins the local treatment of such a case by inserting a small piece of borated cotton, saturated with pure glycerine, against the anterior lip of the cervix, crowding it somewhat back into the vagina. The cotton rolls into a ball which tends to displace the cervix backward and lift the fundus. A string is attached to the cotton, by means of which the patient can remove it, which she is instructed to do in twenty-four hours. The pledgets are put in two or three times a week until the patient bears the vaginal examination without pain. The patient is also instructed to use hot-water-vaginal douches during the intervening days. If the case is complicated by peri-uterine congestion or subacute inflammation, the simple glycerine pledgets are replaced by similar pledgets saturated with a mixture of alum, one part to pure glycerine fifteen parts, and sufficient carbolic acid to act as a disinfectant, usually one drachm to the pint. The size of the pledgets is gradually increased. As a rule an ordinary case will change much in two or three weeks by this preparatory treatment. Occasionally six or eight weeks of such treatment will be required before the next step can be safely undertaken.

Dilatation.—The patient being in Sims' position, the vagina is sponged out with a solution of 1 to 3,000 of bichloride, or 1 to 20 of carbolic acid. All instruments are kept in a solution of carbolic acid. Then the Sims' uterine dilator is inserted into the uterine canal. The dilator when properly curved can be passed almost as easily as the sound. The blades should be forced apart about two lines. The amount of force required for this amount of dilatation will vary very greatly, but usually in old cases it is considerable, especially those of an imperfectly developed type. This procedure causes more or less, and in some cases, intense pain. The dilator is withdrawn and the cervical director introduced to the os internum. The applicator, previously wrapped with cotton, is dipped into pure carbolic acid, the free acid having been rubbed off, and is passed through the tube of the director directly to the os internum, and thoroughly applied by turning it about and slightly withdrawing the tube and applicator. About twenty grains of iodoform are blown against the cervix as the speculum is withdrawn. In some cases the pain is immediately relieved. Rarely, the patient complains of pain for several hours. When properly performed, as directed above, and if antiseptic precautions were used, he had never seen any harm from this treatment. The first dilatation can be made at the patient's home, and she is kept in bed for the rest of the day, or until all disturbance has ceased. As a rule, it is best to allow at least a week to pass before the dilatation is repeated. The glycerine pledgets can be inserted as usual in the meantime. Sometimes he repeats the dilatation three times between the menses, but usually twice is sufficient, and if the dilatation can be carried to a point where the blades are four lines apart at the os externum, the dysmenorrhœa is relieved in the majority of cases where there is no active endocarditis, or endo-cervicitis, and in the majority of cases it is the beginning of a permanent cure.

In married women, if nothing is done to prevent impregnation, sterility will often be cured by this simple treatment, but in certain cases the method causes only temporary relief, and it becomes necessary to resort to Sims' operation, which is division or divulsion and incision, with the use of a glass-plug or some pessary, or, what he liked better, a hard rubber drainage-tube containing deep grooves.

Dr. Wylie performs Sims' operation with some modification. He divides the posterior wall of the cervix in the median line for half an inch or more, according to the length of the infra-vaginal part. The lining membrane is divided the full length of the cervix, and the muscular walls are also divided for some distance under the external mucous membrane covering the infra-vaginal cervix. He regarded it as a mistake to divide all the muscles, and especially the vaginal mucous membrane of the cervix as far as to the vaginal junction. After this incision the dilator is introduced and the os internum freely divulsed. Dr. Sims always divided the anterior wall at the os internum, but Dr. Wylie had lately trusted to the dilators to overcome all of the constriction at this point, for he had never seen a full-sized plug introduced after incision as far as the os internum without the free use of the dilator. The dilatation should be done slowly so as to give time for the tissues to stretch and not to tear.

Dr. Wylie had never believed in the necessity of the bilateral operation. In those cases where Dr. Sims recommended it he would dilate or divulse and keep open with a drainage-tube. If the dilatation is imperfectly done the relief is only temporary, but when thoroughly done and repeated, say twice in two or three months, it will often effect a permanent cure in cases of even ten years' standing. Child-bearing is the best means of complete development and making a permanent cure in such cases.

Sponge-tents.—For more than ten years he had not used tents in these cases.

Dilatation by sound.—The uterus is too movable and elastic to permit of the use of sounds to the best advantage, and many cases have been sounded up to the os in-

ternum and not beyond. Still he had to confess that we could more easily dispense with the uterotome than with uterine dilators, but dilators could do serious harm when dilatation was carried too far, and if one use a screw to force open the dilators the risk was greater than when he used his hand or hands to regulate the amount of dilatation.

If the use of *pessaries* in anteflexion had never been taught, much harm would have been averted, and more progress made in the right direction. As to the use of stem-pessaries for straightening the canal they may do good by stimulating development, but many of them are dangerous instruments. In some cases he used a drainage-tube of hard rubber with one or more deep grooves in it, the object being to keep up perfect drainage, but not with the idea of using a splint on the fractured or bent uterus.

Dr. Wylie then spoke of the complications, and gave the following conclusions to which he had arrived:

First.—There is undoubtedly a certain number of cases in which a marked degree of anterior curvature gives no painful symptoms.

Second.—Anterior displacements are the result rather than the cause of pathological changes in the uterus. They may add to, and sometimes intensify, disease, but are rarely, if ever, the primary cause.

Third.—Dysmenorrhœa with anteflexion is rarely, if ever, chiefly and directly due to the flexion, but the latter in some cases may aggravate the pathological conditions which are the real cause of the pain.

Fourth.—The attempt to correct anterior displacements by the use of pessaries is rarely, if ever, sufficient to effect a cure unless the cervix is dilated at the same time, or other pathological conditions are treated. The use of mechanical supports may give some relief, but they are often merely palliative, and, as used by many, they frequently do harm.

Fifth.—The true morbid condition of the uterus in most cases of anteflexion is one of imperfect development, while the uterine canal is more or less stenosed by the degeneration and contraction of the uterine tissues, and the mucous lining is degenerated and atrophied, often hyperæsthetic, especially in that part of the organ where the circular fibres are most powerful and contracted, namely, at the os internum.

Sixth.—If the above is true, the treatment obviously would be to stimulate development by improving the general health and by the local use of electricity, to relieve the stenosis by dilatation, or division and divulsion, to effect drainage, and to bring about a healthy condition of the mucous lining.

Dr. H. T. Hanks said he was certainly very thankful to Dr. Wylie for his excellent paper upon this subject, especially because it was a subject worthy of consideration by gynecologists. He had been very much interested in the statement made by Professor Thomas in his address before the New York State Medical Association, namely, that there was such a thing as curing anteflexion and dysmenorrhœa by rapid and forcible divulsion, and he thought many of us had yet to learn that this procedure could be resorted to with almost uniform benefit. Dr. Hanks believed that four-fifths of all cases of anteflexion which needed treatment could be cured by rapid and forcible dilatation. The results of treatment in his cases had been the same as Dr. Wylie had reported; that is, he had effected cure in thirty-three or four out of thirty-five cases. He had found the hard-rubber dilators to which his name had been attached as serviceable, in the majority of cases, as any instrument which could be employed. He had used the instruments recommended by Dr. Ball, Dr. Sims, Dr. Goodell, Dr. Ellinger, and others, and they were excellent instruments.

One reason for resorting to this method of treatment was the fact that there was no deformity after rapid and forcible divulsion, and there was no doubt that a new condition of the tissues was established as a result of the thickening which took place after the operation, and which in some cases requires some little time to remove. If the canal is dilated to fifteen or eighteen, American scale, it will not contract, as some had supposed.

With reference to after-treatment, he always kept his patients in bed for six or eight days, and more or less under the influence of opium. It might not be necessary but he had always done it, and had not had pelvic peritonitis develop until his patients had gotten up and been about the house, and it was evident that the pelvic inflammation was due to some indiscretion.

With reference to instruments he thought that Dr. Ball's, if it could be bent, would be better than any which had been devised.

There was one peculiarity which he wished to mention, and it was that dilatation was apparently done by pressing the hands together, but it would be noticed that the points of the instrument within the internal os did not always dilate so much as was supposed.

He did not claim so much for the hard-rubber dilators as formerly, but he always knew when one passed through the internal os, and the operator always knew just how much the internal os was dilated. He thought that this was one of the advantages which the hard-rubber dilator had over the Sims or the Peaslee sound.

Another advantage which the hard-rubber instrument gave was that it could be turned over and retroflexion of the uterus produced. In this manner the anterior wall of the cervix was stretched somewhat, which he had thought was of some advantage. However, either instrument could do the work well in the hands of skilled operators.

The Chairman had been especially pleased to hear Dr. Wylie direct attention in his paper to the necessity of having the patient in a good general condition before resorting to any operation. Some years ago he performed rapid dilatation in many cases, and produced pelvic cellulitis in many instances, and in some pelvic peritonitis, and while Dr. Hanks had expressed the urgent desire that the teaching of the treatment by rapid dilatation should be repeated frequently, the Chairman hoped that with each instruction there would be given the caution that the pelvic organs should be in as healthy a condition as possible under the circumstances, before resorting to any operative procedure, as he had become abundantly satisfied that the ill results which followed in his cases were due to the lack of this preparatory treatment.

With reference to instruments, he thought a good deal depended upon the dexterity of the operator. A man was very poorly qualified to dilate the cervix if he was unable to say whether or not the instrument had entered the os internum.

Some years ago he devised an instrument for dilating the os internum, and thought that it, more than any other instrument, was capable of entering that portion of the canal with the greatest ease, and it had the capacity of dilating the internal os to any extent desired.

Notwithstanding, he thought he had gained a great deal in the way of the dilator, it seemed to him that the best dilator was the circular wedge, especially for the uterine canal.

With reference to the point made by Dr. Hanks concerning the capacity of the instrument to retroflex the uterus, it was a question whether that manipulation would be allowable in very many cases, because the violence done in the dilatation of the os internum was about as much as could safely be endured at one sitting, particularly if the patient was not under an anæsthetic.

Dr. Hanks thought no judicious surgeon would attempt to dilate the uterine canal without thoroughly anæsthetizing his patient. With regard to sounds, no one should attempt to use an instrument larger than a small Simpson sound, if he wished to dilate without an anæsthetic.

The Chairman directed attention to two other points

which Dr. Wylie had mentioned. First, Dr. Wylie seldom makes an incision in the anterior wall of the cervix, and in that he departs from the method employed by Dr. Sims and does so without giving his reasons. It would seem that if the incision was necessary at all it would be necessary at that point.

The Chairman also suggested whether it would not be well to introduce a smaller pessary with an olive bulb to prevent union after the incision had been made.

The author of the paper also made reference to the rubber stem pessary with a groove in its side. The chairman supposed the preference for the hard rubber was the fact that the groove could not be made in glass. Other things being equal, he should prefer glass. The chairman then exhibited several glass tubes which he had used, having a hole through the centre, and they had been made so strong that it was impossible to break them with the fingers.

Dr. Sell said that if there was any comparison to be made between divulsion in the cervix uteri and the same procedure in the urethra of the male, he would say that the plan advocated by Dr. Wylie was very much the best.

He could not exactly say that we had reached the time when dilators, such as Peaslee's, should be altogether thrown aside. He had used them when divulsion was not in vogue, and had succeeded in curing his patients.

He had been pleased to hear that the best method of treatment was pregnancy, and he had succeeded in many cases with the introduction of Peaslee's sound; sometimes he used a tent, occasionally slightly nicking the cervix just sufficiently to admit the probe, in establishing a condition which permitted pregnancy and cure of the patient. He was especially pleased with the remarks made by Dr. Wylie concerning the preparatory treatment, but did not hear anything especial with reference to medical treatment, as such, in these cases. Dr. Sell then spoke of the beneficial effects produced by the internal administration of certain remedies, such as helonias, caulophyllum, cimicifuga, nux vomica, etc. With reference to the use of pessaries, he thought that they could be used, not to abuse the patient and set up inflammation, but as tampons are used with reference to special conditions. He believed in preparatory treatment, and, when the patient had reached a certain point, a pessary could be used with advantage, and then by the internal administration of remedies the dysmenorrhœa could be overcome, the leucorrhœa relieved, and a cure would follow in very many cases.

Dr. A. M. Jacobus had seen Dr. Wylie operate upon a large number of cases with and without anæsthetics, and had seen most excellent results follow. It might be better to resort to an anæsthetic, but there were very many cases in which divulsion could be practised safely without an anæsthetic. He had not seen a patient die after divulsion, and he had seen a fatal result follow very slight dilatation and with a steel sound. He thought that after the patient had passed two or three years of menstrual life without being relieved, local treatment should be begun to develop the uterus, and that the patient in consequence would be less likely to require future treatment for the dysmenorrhœa and sterility.

He did not believe that there was a single antiflexion pessary which could be used with safety. Of all the instruments which he had employed, or seen used, he preferred that used by Dr. Wylie to any other.

With regard to preparatory treatment, it was exceedingly important, as had already been mentioned by Dr. Wylie. He thought that the uterus could be straightened up considerably by means of the tampon, so much so that the divulsor could be used later without special difficulty.

Dr. Wylie, in closing the discussion, said that he had not had a single case of cellulitis occur as a result of operative procedure in private practice. Further, that he had no special faith in the efficacy of remedies, any more than that they might improve the general condition, and in that way help a weak organ. He thought probably that electricity would do more good than any special remedies which might be administered internally. His faith in treating symptoms had not been very great. As to the use of pessaries, he was satisfied that practically they were of but little value, although he was aware that some of our very best men employed them a great deal. The great trouble was that when a gynecologist was thoroughly interested in a pessary he was very apt to make the patient fit the pessary instead of the pessary fitting the patient. He also thought that glass was preferable to hard rubber for the plugs as a general rule, but it being so much more difficult to obtain he had substituted the hard rubber.

The reason why he had not performed Dr. Sims' operation was because he had found that by slightly dilating the canal, merely enough to give free drainage, the circulation of the mucous membrane had been improved, and then by the application of remedies the development and improvement of its general condition had been so great that it had been unnecessary to resort to further procedure. He had not found it necessary to give an anæsthetic unless the tissue of the cervix was very hard.

Dr. Wylie's reasons for not cutting the os internum was because he looked upon it very much as a sphincter, and if he wished to remove its spasmodic action he did not cut it, but dilated it a little, and then tore the tissues beneath the mucous membrane. Besides, he had seen Dr. Sims cut and then fail to introduce the glass plug. Again, when he found that he could accomplish with the divulsor what Dr. Sims had endeavored to do with the knife first and then using the divulsor, he had ceased to use the knife. The ease with which the cervix elongates had caused him to use the divulsor, holding the cervix firmly with the tenaculum.

When he dilates, as he called it, he did it only after he became perfectly familiar with the case, had given it preparatory treatment, and had learned the complications. If it was a case which did not need divulsion then he dilated. He resorted to divulsion or the use of the knife in not more than one in six, perhaps ten, cases where ten years ago he would have resorted to these measures, simply because he had found that dilatation would accomplish all that was desired. When he divulsed it was in cases in which he had resorted first to preparatory treatment and then to dilatation, and finally adopted divulsion because dilatation did not effect a cure. When he divulses he generally does it with the patient under the influence of ether, and he would put them to bed and keep them there, not for three or four days, but for two weeks. He never allows them to rise from the bed with the stem pessary or drainage-tube in position, unless it is absolutely necessary. He prefers, as a rule, to have the patient wear the tube after one menstruation; that is, remove it during menstruation and wear it afterward.

Dr. Sell said he had used electricity, and had found it an excellent method of treatment. He would further remark that dispensary treatment was somewhat different from that which could be adopted in private practice, and thought it well to have medicinal means to resort to independent of operative procedure.

The Chairman referred to one point which he had noticed in seeing Dr. Wylie operate, namely, that the pressure made upon the handles of the divulsor was intermittent, and that the instrument was turned slightly at short intervals, so that the intra-uterine pressure was brought to bear upon all parts of the circumference of the cervical canal.

The Swallowing of a Shawl-pin.—Dr. F. W. Smith, of Syracuse, N. Y., writes that he was called to see a woman who had accidentally swallowed a shawl-pin four and a half inches long. She passed it by rectum three days later, without suffering any inconvenience.

FIFTY-SEVENTH MEETING OF GERMAN NATURALISTS AND PHYSICIANS,

(Special Report for THE MEDICAL RECORD.)

A LARGE number of scientists and physicians from all parts of Germany attended the fifty-seventh annual meeting of the Association, at Magdeburg. They were greeted at the opening session by DR. GAEHDE, who delivered an eloquent

ADDRESS OF WELCOME.

He reviewed briefly the history of the Association, which had been the parent of many other illustrious bodies, such as the Surgical Congress, the Congress for Internal Medicine, the Public Health Association, etc., and had been the model and exciting cause of many of the existing international congresses. But while, the speaker continued, this Association might indeed be proud of her children, yet it should be remembered that there was danger to her own strength in so many childbirths. He counselled his hearers therefore to stand by their old mother and see that she was not injured by the rivalry of her progeny.

THE SECOND ADDRESS

was by PROFESSOR HOCHHEIM, who recalled the scientific glories of Magdeburg, and dwelt upon the appropriateness of its selection as a meeting-place for German naturalists. The first medical paper was by DR. ROSENBACH, of Göttingen, and was upon the

RELATION OF MICRO-ORGANISMS TO WOUND INFECTION.

The paper was a most interesting one, but was chiefly historical and critical in character, and contained little that is not already known upon this subject.

The next paper of interest to physicians was by DR. SCHWARTZ upon the

RELATION OF HYGIENE TO PRACTICAL MEDICINE.

In spite of the great advances made in recent years in the study of public health and of the actual results already obtained, there yet remained much, very much, to do. Hygienists should not think of rest until the last dark and unventilated bed-chamber had been destroyed, the poor man's table had been covered with nourishing and unadulterated food, and the modern scourge of brandy had been driven back. Unfortunately but little assistance was obtained from the people themselves; it was necessary in many instances to force them to be clean. The practising physician could aid the hygienist greatly by seeking, whenever possible, to impress upon his patients the necessity of light, ventilation, and personal cleanliness.

The general session was then closed, and the scientific labors of the members were continued in the several sections.

SECTION FOR INTERNAL MEDICINE.

PROFESSOR SEELIGMÜLLER, of Halle, presented a communication upon

CARDIAC DEBILITY.

The author pictured the group of symptoms, usually called cardiac neurasthenia, as follows: After a period of cardiac disturbance, palpitation, pain in the precordial region, there ensues a condition of general weakness, expressed by fatigue after slight exertion, insomnia, forgetfulness and distraction, and a depression of spirits. At the same time, despite a good appetite, sometimes even boulimia, there is a falling away in nutrition, the extremities are cold, and there is at times a feeling of formication. In the absence of any organic changes, the author was inclined to refer these symptoms to anomalies of innervation, especially as they occurred most frequently after psychical disturbances, as prolonged sexual excitement, severe mental labor, combined with broken rest, etc. Rest, warm baths, good nourishing food, sea or mountain air, and quinine in small doses often exerted a favorable effect.

DR. WAGNER spoke of the difficulty of diagnosis at the first examination in these cases. In all heart affections where there were no apparent physical disturbances, especially in those of advanced years, disease of the coronary arteries should be suspected. The speaker had seen cases similar to those described by the author of the paper in women who had borne many children or who suffered from certain forms of uterine disease. This condition was caused in those cases by an overloading of the abdominal organs with blood, and was much benefited by wearing an abdominal supporter.

PROFESSOR STRÜMPELL, of Leipzig, then followed with a paper on

ACUTE ENCEPHALITIS OF CHILDHOOD.

This affection resembles in nearly every particular infantile spinal paralysis. It occurs with greatest frequency during the first and second years of life, seldom later. There is usually an initial stage of fever, vomiting, and convulsions, followed after a varying period by paralysis. This is usually nearly complete on one side of the body. It diminishes after a time, but usually leaves more or less impairment of motion and of growth in the parts. Sometimes the affection is followed by motor irritative symptoms, such as epilepsy or athetosis, or by impairment of the intellect or power of speech. The sensibility of the paralyzed side is unaffected. The disease is located in the cortical substance. The speaker thought it possible that poliencephalitis and poliomyelitis might be essentially the same conditions, the disease being located now in the gray substance of the cord and again in the corresponding portion of the encephalon. In answer to a point raised in the discussion of this paper, the author said that he made a diagnosis of acute encephalitis only in those cases in which there was an acute initial stage followed by a stationary cerebral paralysis.

PROFESSOR EBSTEIN, of Göttingen, followed with a communication on

THE TREATMENT OF TYPHOID FEVER.

His conclusions were based upon an experience with upward of two hundred and fifty cases seen within a period of seven and a half years, and were as follows: 1. The so-called abortive treatment with calomel is useful, and therefore to be recommended. 2. A treatment based upon etiological grounds is impracticable, and the management of the disease must be regulated by a careful study of all the symptoms. The diet requires special attention. 3. The struggle to reduce a long-continued high temperature is necessary only when there are threatening symptoms on the side of the heart or nervous system or both, or when the fever itself reaches a dangerous height. 4. The author's experience led him to assert that the best results were obtained when reliance was not placed exclusively upon cold baths or any other so-called strictly antipyretic method. As regards antipyresis from drugs he had met with success in the use of salicylate of soda.

PROFESSOR KOEBNER, of Berlin, read a paper on the

THERAPEUTIC USE OF THE LOCAL ANTISYPHILITIC ACTION OF MERCURY.

The author related a number of instances showing the value of mercury locally applied, either endermically or hypodermically, in syphilitic affections. In the former case the mercury acted by direct absorption through the skin, and not through the inhalation of mercurial vapor, as was supposed by Kirchgässer. The speaker urged a more general employment of the local or regional application of the drug in connection with its internal administration. Whenever, after the general treatment of syphilis, there remain any indurations either of the primary sore, of the neighboring glands, or of any of the tissues,

we must seek to cure them by the local application of mercury. In this way we get rid of future centres of infection. Thus the occipital and cervical mastoid glands, which are usually passed by, should be treated for a long time by mercury endermically, the applications being interrupted from time to time in order to obviate the liability to inflammation of the skin and consequent impediment to absorption. Of course in such cases it must first be determined that the enlarged glands are not due to some local irritation within their lymphatic district, as for example when the glands of the neck are enlarged by reason of ulcerations in the posterior nasal region. The author, after trying various preparations, found that the most effectual as well as the least irritating was freshly prepared ointment of the gray oxide.

Dr. Anfrecht, of Magdeburg, read a paper of considerable length upon

CROUP AND DIPHTHERIA.

He regarded these two affections as absolutely identical. The bacteria were the same in either case and the anatomical differences were only apparent. In croup the membrane is separated entire and expectorated in the form of a tube, while in the faucial affection this does not happen. In diphtheria the mucous membrane is sometimes the seat of ulcers, but this, the speaker maintained, is the result of local treatment. It has been stated that the membrane in the pharynx could be removed only by force, while that in the larynx often became loosened spontaneously, but Dr. Anfrecht said that the mistake had been made of comparing the disease in the two parts at different stages of its progress. The pathological process begins in an exudation of fibrin from the blood-vessels of the mucous membrane excited by the presence of the bacteria. This fibrin is poured out between and upon the epithelial cells, and the strength of the attachment of the false membrane is dependent upon the depth to which the fibrin has penetrated the epithelium into the mucosa. The author did not believe that any advantage was to be derived from a local treatment of the disease. In the Magdeburg Hospital during the past four years two hundred and twenty-five cases of diphtheria had been treated, and but one death had occurred, and that was in a case in which a local treatment had been pursued. Cold compresses were applied to the throat and a gargle of chlorate of potassium was used. In children who could not gargle, small doses of the drug were given internally.

Some discussion followed, in which the author's views were in general subscribed to. The discussion was participated in by Drs. Schwalbe, Rindfleisch, and Rosenbach.

Professor Ackermann then read a paper on

CIRRHOSIS OF THE LIVER.

What is usually understood by cirrhosis of the liver, the interstitial hyperplasia of the connective tissue, is, strictly speaking, not the morbid process, but rather the expression of a secondary salutary process. The primary process is nothing else than a necrosis of the liver-cells induced by the presence of some poisonous substance (alcohol, phosphorus, and sometimes, also, it would seem, micro-organisms), which necrosis seems to be accompanied always by a deposit of fat in the cells. The cells are destroyed, and then follows a new formation of connective tissue proceeding from the interlobular substance. This is not a true inflammation, as there is no hyperæmia nor exudation of white corpuscles from the blood-vessels. There is, however, from the beginning a new growth of capillary vessels. But the interstitial new growth is not confined to a development of the connective tissue and blood-vessels, but embraces, also, the biliary vessels. This is a conservative measure, for otherwise the excretion of bile would be so greatly impeded as to destroy the life of the patient. The existence of these enlarged blood- and bile-vessels speaks against the view that the atrophy of the organ is due to a contraction of the newly-formed connective tissue. The atrophy is really due to an excess of cell-destruction over the new production of interstitial tissue. When, however, the new formation is in excess we find hypertrophy of the liver, a condition which is very common, especially at the commencement of the disease. There is another affection, probably identical with what has been called *cirrhosis glabra*, in which there is hypertrophy of the organ due to a diffuse hyperplasia of the inter- and intra-cellular connective tissue. This, however, has nothing in common with ordinary cirrhosis of the liver. There is no new formation of blood-vessels, but the old vessels remain normal and potent, and there is in consequence no ascites. The liver remains enlarged throughout the whole course of the disease, and the cells become atrophied from pressure of the surrounding connective tissue and not from a primary degenerative process.

After some discussion on this paper, Dr. Jürgens, of Berlin, presented a communication upon the

ANATOMICAL CHANGES IN ADDISON'S DISEASE.

The true seat of the disease lies, the speaker said, in the splanchnic nerve-trunks. The degeneration of these nerves may occur as a protopathic affection. In such cases there is a simple degeneration of the supra-renal capsules without any inflammatory manifestations in these or the neighboring organs. A deuteropathic disease of the splanchnic nerve following a primary affection of the supra-renal capsules or pancreas, is of much more frequent occurrence. But in all cases of disease of the supra-renal capsules, or of the pancreas, in which there is no bronzing of the skin, the splanchnic nerve-trunks are found intact.

NEW YORK PATHOLOGICAL SOCIETY.

Stated Meeting, November 12, 1884.

R. E. Van Gieson, M.D., Vice-President, in the Chair.

PYELO-NEPHRITIS—REMOVAL OF THE KIDNEY BY ABDOMINAL SECTION.

Dr. H. C. Coe presented a specimen with the following history: The patient entered the Woman's Hospital two months ago with a tumor about the size of the fœtal head in the right iliac region, and rather movable. The tumor would disappear at intervals, and just previous to its disappearance the patient would pass large quantities of urine. No clue to the character of the disease was given by the examination of the urine. An exploratory incision was made, and hydronephrosis encountered, and the sac was removed. The patient developed peritonitis and died on the eighth day. After the operation there was never more than a slight trace of albumen and a few casts in the urine.

At the autopsy it was found that the stump had been secured, but the ureter had slipped and was blocked up with a clot, and some of the veins had also retracted beneath the peritoneum, giving rise to slight hemorrhage. The opposite kidney was not especially abnormal.

The particular point of interest in the case was that two days before death the woman had begun to menstruate, and the picture of the pelvic organs was very interesting. The uterus was retroflected, and all the pelvic organs were very much engorged with blood. The fimbriated extremities of the Fallopian tubes resembled dilated veins. The uterus was congested, and was like a sponge, blood flowing freely from all the sinuses. There was a corpus luteum in one of the ovaries.

On opening the uterus the mucous membrane was covered with a thin film, which could be raised with the forceps, and on examination, microscopically, it was found to be a layer of epithelial cells and blood under-

going fatty degeneration. The appearance seemed to confirm the theory of denudation of the mucous membrane in menstruation.

The ureter was perfectly normal, as also was the bladder. There was no mechanical obstruction between the kidney and the meatus urinarius, and the only explanation which he was able to give concerning the cause of the hydronephrosis was that there was merely a valve-like fold at the ureter as it opened into the cyst.

An interesting question arose; namely, Was there any uræmic element in the case? Twelve hours preceding death the patient passed only about two ounces of urine, which had a specific gravity of 1.020, exhibited a trace of albumen and a few casts, but no blood.

Dr. Peabody thought that too much stress was laid upon urea as a cause of uræmia, for the condition known as uræmia had been proven to be independent of any retained urea in the economy. He thought it had been shown that more urea can be injected into the veins of a dog than any human being can retain in any process of disease of the kidneys, and without producing any such symptoms as are passed under the name of uræmia. He did not think that urea had anything to do with uræmia.

Dr. Seguin remarked that he had been of the same opinion as Dr. Peabody, but Gréhant and Quinquand communicated to the *Academie des Sciences*, on August 25, 1884, the results of recent experiments in which they produced artificial uræmia by the hypodermic injection of urea in animals. Perhaps, therefore, the question had not yet been entirely settled.

Dr. Wendt thought that probably Dr. Peabody went too far when he said urea plays no rôle at all in the production of uræmia. He thought that the retention of urea was certainly one of the factors in the production of uræmia, although it might not be the only one.

Dr. Peabody said that one of the strong points in favor of the theory which he had mentioned was the fact that urea is excreted in large quantities by the mucous membrane of the intestines. It had been shown that by tying the ureters in roosters the urea, being unable to make its exit through the ureters, is found in large quantities upon the mucous membrane of the alimentary canal, and the conclusions to which he alluded were based upon experiments of this character. It would seem to be irrational, therefore, that urea should not find its way out of the human economy in the same way when it can do so in other animals, and that it can do so in other animals has been proven without doubt.

ANÆSTHESIA OF THE LEFT TRIGEMINUS, WITH SO-CALLED TROPHIC ULCERATION OF THE HELIX.

Dr. Seguin presented a patient, a man forty years of age, with the following history: He had had partial anæsthesia of the left trigeminus, left occipitalis major and minor nerves, of left superficial cervical plexus, and of left ulnar and median distribution for a year. The external ear is almost totally insensible. A few weeks ago a small "blister" appeared on the left external ear, in the lower third of the fossa of the helix. This has become an ulcer, which my colleague at the Manhattan Eye and Ear Hospital, Dr. Pomeroy (by whose courtesy he had seen the case) designated perichrondritis and chrondritis with perforation. There are no signs of ordinary hæmatoma. Under a dressing with bichloride of mercury lotion the ulcerative process has been arrested and repair is progressing. The only other symptom presented by the patient is paralysis of the left vocal cord, dating back six years to an attack of hoarseness. The man had never had syphilis, and the pathology of his anæsthesia (which certainly is not hysterical hemi-anæsthesia) was, he confessed, quite obscure. From the absence of neuralgia he was disposed to exclude disease of the trunk of the trigeminus or of the Gasserian ganglia. The ulcerations of the cornea (and phthisis bulbi) coexisting with trigeminal anæsthesia are well known, though rare. To his present knowledge this case was unique.

It has been claimed that the ulcerative keratitis of trigeminal anæsthesia, and the peripheral ulcerations after sections of nerve-trunks were active "trophic processes," the direct result of injury to "trophic" nerve-fibres contained within the affected nerve-trunks. The experiments of von Gudden and of Snelling have shown this theory to be untenable as regards the trigeminus. These experimenters found that by protecting the cornea (Gudden by artificial ankylo-blepharon, Snelling by sewing a rabbit's ear over the eye) there might be complete anæsthesia of the trigeminus with a perfectly clear, healthy eyeball. Long before them, however, Brown-Séquard had demonstrated that a guinea-pig's foot might be kept indefinitely healthy after section of the sciatic, by care and cleanliness. The conclusion reached by these physiologists, and the view now held by most neurologists was, that the keratitis or ulcerations of the foot was traumatic and infectious, the anæsthesia acting only as a predisposing cause by allowing injury, and by (in the case of the cornea) preventing the normal reflex protecting movements.

"In the case before us I believe that the ulceration was caused by scratching and subsequent sepsis of a little spot on the helix, the analgesia rendering the initial injury and subsequent extension of disease easy and rapid. In other words, had this anæsthetic ear been fully protected from injury and bacteria it would have remained sound. The healing under antiseptic dressing and protection, while the analgesia persists, is a proof of this view. Let me add that I know of one fact in experimental pathology somewhat analogous to this case. Years ago Brown-Séquard showed that after wounding one of the restiform bodies of the medulla in guinea-pigs the external ear on the same side often showed gangrenous ulceration at the tip and edges. May it not be that the wound in the medulla extended deeper than intended by the experimenters, and injured the ascending root of the trigeminus, thus causing anæsthesia of the affected ear?"

Dr. Levi thought it was not absolutely necessary that injury should always occur in order that ulceration should exist, because when the nervous supply is interfered with the normal power of repair is diminished. He did not think it was ever pretended that by doing away with the nervous supply of a part it would necessarily die, although it had much less blood to produce that reparative process which is going on in healthy parts. He would like to ask Dr. Seguin whether or not this was a case of ulceration due to interference with the nervous supply of the part.

Dr. Seguin replied that the anæsthesia acted indirectly as a predisposing cause only; that in the anæsthetic condition injury occurred more easily because of the insensibility of the patient to traumatic influences?

INGUINAL KIDNEY SIMULATING HERNIA.

Dr. E. C. Wendt presented a specimen of inguinal kidney removed from the body of a woman who had died of various senile disorders at the age of eighty-six. On admission to the St. Francis Hospital she affirmed positively that she had never known serious illness of any kind. She had for a number of years, how many she could not say, worn a truss for a supposed inguinal hernia. She died soon after admission to the hospital.

At the autopsy the right kidney was found connected by a firm band with the uterus, and was also situated in the inguinal canal, the portion protruding externally being that which had been mistaken for a hernia. It was evidently a congenital condition, and the kidney had no visible pelvis. The ureter was very much shortened. The kidney on the opposite side showed no special change. The renal artery in the inguinal kidney did not spring from the abdominal aorta; it probably arose from the iliac artery. There was no suprarenal capsule connected with the kidney removed from the inguinal ring, although it might be that one existed above.

ENDARTERITIS OBLITERANS.

Dr. Peabody presented a part of the circle of Willis, showing chiefly the basilar artery, together with some of the smaller arteries from the pia mater, removed from the body of a man, thirty-eight years of age, who died with peculiar symptoms. He was brought into the New York Hospital November 1st, unable to speak. He was bright and intelligent, and there was no paralysis of motion or sensation detected at the time of admission. There was exaggerated patellar reflex on the right side. The aphasia was distinctly ataxic, and at the same time the patient was unable to move the tongue. On the following morning there was complete right hemiplegia, the patient soon became unable to swallow, was nourished artificially, developed a rise of temperature in the evening after two days, and on the fourth day he had a succession of attacks of pulmonary œdema, in one of which he died. The urine was normal. The pulse and respiration were normal at the beginning, but toward the end they increased in frequency. At the time of death the temperature was 108° F.

At the autopsy it was found that the lumen of the vessels at the base of the brain, especially that of the basilar artery, was very much interfered with; that it was due to a growth in the interior of the vessels, and exhibited the lesion of arteritis obliterans. Dr. Peabody exhibited microscopical sections. There was a small spot of softening in the left corpora striatum and internal capsule, and the blood-vessels in these regions, upon both sides, were distinctly calcareous. The softening was localized. The convolutions were all normal. The other organs throughout the body were substantially normal, except old fibrous indurations at the apex of each lung, and in one kidney there were two small, old abscesses.

Dr. Seguin asked concerning the condition of the left Sylvian artery.

Dr. Peabody remarked that he examined this artery with special care, and there was apparently nothing wrong with reference to it.

ANEURISM OF THE ARCH OF THE AORTA—LOBAR PNEUMONIA.

Dr. Beverley Robinson presented specimens accompanied by the following history, furnished by Dr. J. M. Mabbott, of St. Luke's Hospital: Nicholas B——, fifty-three years of age, married, native of Switzerland, was admitted to the hospital July 14, 1884. The patient's family history was negative. He had a venereal sore in 1854, not followed by suppurating bubo. An eruption appeared upon the legs a few months afterward. In 1857 he had acute rheumatism, but suffered from no cardiac symptoms following the attack. He had pleurisy on the right side one year ago. He has indulged freely in alcoholics and tobacco. During his stay in the hospital the patient presented symptoms of aneurism of the arch of the aorta, which gave rise to marked difficulty in inspiration and expiration, but no other evident symptoms, so far as the pulse was concerned, and no paralysis of the vocal cords. On the evening of October 30th the patient had a slight chill, followed by excessive dyspnœa and very severe pain in the right side. On the following morning his temperature was 103.5° F., pulse 126, and the pain and dyspnœa continued. The breathing was laborious and the respirations were not increased in frequency. The patient died November 2d.

At the autopsy a few old adhesions were found over the apex of the left lung. The middle lobe of the right lung was in a state of red hepatization, and the pleura covering it had a large amount of recent fibrin upon its surface. The upper and the lower lobes of the right lung, and the whole left lung, were in a condition of emphysema.

The heart was of normal size, the valves competent, the muscular tissue of good consistence. The aorta was markedly atheromatous, especially the ascending portion of the arch, where was a large aneurismal sac, arising from the arch just at the origin of the right innominate artery, extending upward and forward, and pressing against and becoming adherent to the sternum. It was as large as a man's fist, and contained recent clots. There was a second aneurismal sac, extending backward and somewhat to the left, arising just below the origin of the left carotid and subclavian arteries. The innominate, left common carotid, and left subclavian arteries were also atheromatous.

The kidneys and liver were congested, the spleen was soft and friable. The stomach and intestines were congested.

From a clinical point of view the case was interesting because of the absence of the radial pulse, the presence of two considerable aneurismal sacs, the absence of any disturbance of the larynx although the trachea was considerably compressed. Although there was a distinct chill with complaint of pain in the right side nothing was found on physical examination which enabled him to say that pneumonia or pleurisy existed. There was no sputum. The primary cause of death was aneurism; the secondary, pneumonia.

Under such circumstances Dr. Robinson thought that one could only presume the existence of the pneumonic condition, without being able to say positively that it existed.

TUBERCULAR MENINGITIS—OLD CATARRHAL PHTHISIS.

Dr. Van Gieson presented specimens which illustrated in a remarkable degree the conservative and curative processes of nature, unaided by the physician's skill or art. They also illustrated the aphorism of Niemeyer, that the greatest danger to which phthisical subjects are placed is that of becoming tubercular. They were removed from the body of a man, fifty years of age, whom he first saw November 5th. At that time the patient was somewhat actively delirious, without special elevation of temperature. On physical examination there was found evidence of solidification of the apex of the right lung, and he was somewhat inclined to take the view that it was a case of low-grade pneumonia. At the next visit the delirium had increased, and Dr. Van Gieson succeeded in obtaining a history, which was that the patient had had vomiting more or less for several days, intense headache, and had had a staggering gait. The man became violent, and he was sent to St. Catherine's Hospital on Thursday, and died on the following Monday night. During his stay in the hospital there was no elevation of temperature. He died in a state of partial coma, varied with active delirium. At the autopsy the brain presented the typical appearances found in tubercular meningitis. After removing the lungs, the right was found entirely adherent posteriorly as far down as the diaphragm, and was so firmly attached to the diaphragm that it was necessary to cut off a portion of that muscle before it could be removed. The left lung was adherent to the chest-wall by a slight band posteriorly. The upper portion of the right lung was filled with calcified material, and the left lung also contained more or less of calcified nodules. The patient had not had a sick day, nor lost a day's work, during the last thirteen years. Dr. Van Gieson regarded it as probable that during the middle period of this man's life he had what had been called catarrhal phthisis, from which he had recovered. He would ask if it was common to find, post-mortem, such extensive evidence of previously existing destructive disease of the lungs?

Dr. Peabody replied that he had not had an opportunity to examine the specimens presented by Dr. Van Gieson, but he did not think it was common to find extensive evidence of phthisis which had been latent for years. To find occasional nodules was not uncommon, and it was sufficiently common also to be unworthy of special consideration to find extensive pleuritic adhesions.

The Society then went into executive session.

Correspondence.

TRACHEOTOMY IN CROUP AND DIPHTHERIA.

To the Editor of The Medical Record.

Sir: In The Medical Record of December 6th I am pleased to find an interesting communication from Dr. S. S. Jones, criticising my paper on "Tracheotomy in Croup and Diphtheria." Permit me a word in reply.

Dr. Jones says that I "advocate an early operation, giving as a basis for my argument the clinical histories of three cases." Herein he entirely misapprehends the purport of my paper. The latter was written after hearing the essay of Dr. Winters, which is so replete with historical and statistical information that I would have deemed it absurd to *base* any argument by which I desired to second his views, on *statistical* evidence from my own personal experience.

Those who have done me the honor to read my contributions to medical literature are aware of the fact that I am in the habit of fortifying my views by large and unassailable statistical data obtained from all available sources. The latter having (in this case) been already furnished by Dr. Winters, I desired only to aid in combating the unreasonable prejudice which seems to exist against tracheotomy among physicians as well as laymen. With this view I cited three recent cases, as an *illustration* that "one successful tracheotomy (in this instance performed by Dr. A. Jacobi) would do more to neutralize groundless apprehension than all the statistics," etc.

As "two of these cases were circumstanced precisely alike, being of the same age and in the same social grade," and occurring in the same epidemic, I utilized them to contrast the result of an early operation with that of a late one. If I had wished to enter into details I might have stated that in this epidemic of laryngeal diphtheria, which swept away quite a number of children (I have not yet obtained the exact figures from the attendants, being myself only called in council in a few cases), *the only recovery was in the case I cited as being tracheotomized*, and I might have furnished other details, which I reserve for future discussion. It was not my intent to write an essay, but simply to arouse an interest in the discussion, and I am glad that this result has been attained.

Dr. Jones has also misunderstood my position with reference to an early operation. If he will read my paper carefully he will find that I say "it is the duty of the attendant to operate early in the first indication of *abiding* laryngeal stenosis." Cases may, as he says, appear "threatened by asphyxia and yet recover." It is for the attendant to decide whether the stenosis is *abiding* or only paroxysmal. I have myself watched a case of laryngeal stenosis an entire night, while instruments and table were in readiness for tracheotomy, which was found unnecessary when the morning dawned.

Dr. Jones says: "I cannot but dissent from the conclusion of the author, because I believe that if tracheotomy were generally performed early in croup many children would be unnecessarily subjected to it, and *cures which would have been either spontaneous or the result of medical treatment attributed to it*" (italics mine).

To one who, like Dr. Jones, is "actuated in operating more by the desire to relieve the patient, if only temporarily, than inspired by any great hope of saving life," the fear that tracheotomy may get the credit of a cure without deserving it, may seem an insuperable objection to the operation. But if I mistake not the temper of most practitioners, such an argument would not be regarded a moment when a human life is to be saved. Nor would Dr. Jones' statement that deaths are sometimes attributable, "worst of all, to the accidental stopping of the tube," weigh against the operation, carefully done and watched over in the after-treatment.

It is just this prejudice against tracheotomy which has impaired its usefulness, and to dispel which Dr. Winters' paper and my brief contribution have been written. There exists no more baneful nor more universal error among medical men, especially when our experience is not large, than the habit of making deductions from that small experience for our own guidance. It would surely be far more rational and just to temper our egotism by utilizing as guides the published experience obtained by others from large clinical material—*plus* our own experience. Under such treatment Dr. Jones' seven tracheotomies with one successful result, would lead him to recognize that he is in error, when he regards his own experience in tracheotomy as compared with the results of non-operative management as unfavorable. Dr. J. Lewis Smith has told us that, according to his experience and observations, about *one in eight* recover by inhalation, which he regards as the best treatment. Now, Dr. Jones has had the good fortune to save *one in seven* tracheotomied cases, even when he treated the operation in a kind of "stepmotherly" manner. Hence he should be encouraged by this comparison to look with more favor upon the operation, especially if he will study *without prejudice*, the statistics, "from which it appeared that from twelve to thirty-nine per cent. had been saved by the operation, and, under improved methods of operating, it might be expected to save *one in three* by tracheotomy" (J. Lewis Smith). Indeed, this favorable result is nearly attained in the aggregate of the cases referred to in Dr. Jones' letter and my paper; for here we have *three recoveries in eleven cases* (Dr. Jones one, Dr. Jacobi one, and Dr. Baruch one). Dr. Jones recommends "equal parts of powdered alum and sulphur to be blown into the throat at the moment of deep inspiration as often as asphyxia threatens." This treatment will, I think, find little favor with practitioners. "The child," says Dr Jones, "*struggled through the next thirty-six hours*, expelling shreds of membrane after the insufflation at frequent intervals, until at length on *the fourth day*, the respiration, though *somewhat difficult*, was much deeper and freer" (italics mine). Aside from the apparent cruelty of this procedure, no physician bearing in mind the fact that in diphtheria there is great danger from heart-failure, would have the temerity to subject the little sufferer to the *struggle* incident to this suffocating process, "used, if used at all, freely and energetically."

One of the chief advantages of tracheotomy in laryngeal stenosis, and one which has not been sufficiently emphasized, is the tranquil condition of the patient resulting from the majority of operations. With proper care of the tube and skilled supervision of the after-management, the little sufferer is at once transposed from "a bed of thorns to a bed of roses," as it were. The natural (not carbonic oxide) sleep, the renewed facility of taking nutriment, medicines, and stimulants, the vitalizing influence of free ingress of oxygen to the lungs—all these conspire to change the whole aspect of the case. No statistics are required to demonstrate this fact; it is within the experience of most practitioners.

Let each one divest himself of all prejudice at this time, scan all the arguments and statistics brought forward in the discussion of last March, and in the present renewal, then add his own experience without fear and without favor. The result will be a triumphant vindication of the life-saving properties of tracheotomy, when performed as soon as *abiding* laryngeal stenosis is recognized, and carefully watched in the after-treatment.

Simon Baruch, M.D.

43 East Fifty-ninth Street, December 7, 1884.

The Most Powerful Antisuppurative, according to Trastour, is Lugol's solution, or iodide of calcium. He gives the former in doses of ʒ iij.–ʒ iv. daily.

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Original Articles.

SPINAL DISEASE AND SPINAL CURVATURE.[1]

By MEIGS CASE, M.D.,

LATE SURGEON FORTY-THIRD NEW YORK VOLUNTEERS; LATE PRESIDENT OTSEGO COUNTY, N.Y., MEDICAL SOCIETY.

In the production of diseases or deformities of the spine mechanical causes predominate. It is nearly safe to say that they are all due to some mechanical cause. Any undue shake, twist, or forcible flexion of the eighty articulations of the spine; any direct or indirect violence or contra-coup; any bruise or extravasation into the complicated bony or intervertebral tissues, any disturbance or dislocation upon each other of the seven distinct centres of ossification that compose each vertebra in the young, may be an original cause of disease or curvature.

The precise location of the injury, and the consecutive effect of the weight of the superincumbent parts, from which there is no escape without extension, determine the character and form of disintegration or deflexion which ensue by slow inflammatory processes superinduced by continual repetitions and aggravations of the original hurt. To this is added as the disease advances and pain is developed the well-known destructive influence of muscular spasm or unremitting vise-like compression, produced by nature's instinctive effort to limit motion and thus allay friction of the diseased joint. This effect is not unlike the process by which bedsores are produced by arrest of circulation.

Incessant and unvarying pressure, by its destructive strangulation of nutrient vessels, completes with abscess the disaster of Pott's disease.

The mechanical causes of lateral curvature are naturally those that impair muscular counterpoise. Any local debility or enforced unnatural attitude aided by gravitation may give rise to all the varieties and exaggerations of this deformity. "Any constant pressure on the spine will produce curvature," according to Von Swieten. A trifling deviation at the beginning, perfectly curable by a few weeks' treatment, becomes, when neglected, a serious calamity, "painfully embittering after life," "for of all the varieties of deformity none so greatly detract from the beauty of the human carriage as distortion of the spine."

It therefore follows that every aberration or injury to the spine should be considered worthy of minute attention and subjected to careful treatment at the earliest possible moment.

The unfortunate fact that not one case of spine disease in a thousand is detected and treated as such from the beginning is very discreditable.

Parents discover this and say: "The doctors cannot decide what is the difficulty." Mistaken treatments for malaria, rheumatism, gastrodynia, colic, indigestion, growing pains, and worms, usually employ very considerable time before the serious character and injurious possibilities of the prime injury are plainly diagnosticated by the occurrence of actual deformity.

This period of doubt and incertitude would be abolished with the deformity it perpetuates, if an acceptable, convenient, and ever-ready means of treatment of acknowledged efficacy and utility were at hand; but if the disease remains undetected and untreated until deformity is reached, a great opportunity has been lost, for prevention here, as elsewhere, is better than cure.

It is evident, however, that any treatment sufficiently well devised to relieve, modify, or benefit the most advanced stages of these diseases ought to cure, when early and properly applied in the forming stage.

This brings us to the consideration of the means of treatment in use by the application of some of the forms of so-called "rest."

Among these are "fixation" and "absolute immobility" splints, terms which sufficiently describe popular treatments by "braces" and "jackets."

The number and variety of these devices, all intended by lateral compression, or crutches resting on the hips, to support the weight of superincumbent parts, is appalling. Their production has become "a great American industry." Some of them like the "jury-mast," contain the merest suggestion of spinal extension, upon which alone valid claims to favor could rightfully be based, but accomplish it so imperfectly and indifferently, by means so disadvantageous and indirect, as to have compelled me to adopt a more simple and effective method by which "elastic extension" is furnished without compromising entire freedom of action.

My apparatus consists of a four-wheeled carriage, with parallel bars for the hands, surmounted by two upright spars and cross-piece, from which depends a powerful spiral spring, and below this a swivelled bar, carrying suitable soft leather suspensory rests to embrace the chin and occiput. The elevation is regulated by a screw, and can be increased as tolerance is manifested in the use of the apparatus and the patient gains in height.

In dorsal and lumbar curvature, a corset or waist suspension is added, arranged with large wood rings, through which the arms are passed, so as to avoid any of lifting the shoulders or limitation of their movements in any direction.

The patient can turn around and move freely to and fro, walking or running in the suspension at will, and a pleasing change of position is accomplished by an adjustable seat. Action or continual change of position is thus rendered not only possible, but agreeable and pleasurable.

The proper adjustment of the suspension is directed by the patients themselves.

The spring accompanies every movement and is strong enough to support the entire weight when required. Thus all restriction is practically done away with. I have found it useful in all cases where spinal extension is indicated, and those comprise nearly all spinal affections, not only Pott's disease and all of the forms of lateral curvature, but muscular debility and chronic fatigue of the erector muscles, with or without paraplegia or spinal irritation.

H. Heather Bigg,[1] the celebrated English orthopraxist, sufficiently illustrates the requirements of treatment in these cases when he deplores the fact that "every form of instrument with which I was aquainted before I designed these (a new brace with rubber attachments) limited or entirely suspended muscular motion."

He previously alludes to "*the necessity that appeared to exist for such an application of mechanical power to the treatment of spinal curvature as would admit of complete bodily freedom.*" In this we claim to have succeeded, for the apparatus not only does not impede but

[1] An address delivered before [illegible]dson County, N.J., Medical Society.

[1] H. H. Bigg: Orthopraxy, page 282. London, 1877.

greatly facilitates movement, and fortunately does not add weight to a patient already orerweighted by disease.

A plain reason why the traction is more efficient than any other is that it is not monotonous, but changes with every movement, from a few pounds to the entire weight.

The apparatus furnishes appropriately the most agreeable and beneficial "spinal exercise" for treatment of lateral curvature. It is only by suitable extension that the retraction and wasting of the spinal ligaments and muscles, the absorption of the vertebral tissue, the formation of antagonizing or compensatory curves, or the lateral horizontal movement known as "rotation" can be prevented or permanently corrected.

It is thus more "according to nature" than any form of straitjacket, brace, or "absolute immobility splint" with which I am acquainted. Observing a patient with Pott's disease you will notice that by trying to support the weight of the head on his hand, or leaning across his mother's lap, or sitting with both hands resting on the chair, or walking with a stiff and unnatural gait with both hands on his knees, he is constantly furnishing unmistakably the indications for treatment by extension.

The principal joints of the lower limbs are half bent, to prevent vertebral concussion, the projecting chin and elevated shoulders are held stiffly by rigid spasm of all the dorsal and intercostal muscles.

Movements are executed with automatic precision. Stooping is impossible in the ordinary manner and is accomplished by bending the hips, then the knees, then sliding awkwardly to the floor.

The muscular movements of the heart are directly interfered with by the unnatural spasmodic rigidity of the thoracic compression. It flutters like a bird in its cage, while the respiration, equally embarrassed, is short and grunting. Cyanosis and the peculiar facial expression are thus produced. It is suggestive that no child asks its nurse to compress its chest for temporary rest, or other reason, but if you tentatively lift the head by placing the "elastic extension" of your hands under the chin and occiput, a smile of grateful relief comes over the sufferer's face, and he says, "That feels good."

Now if you take the little patient at his word, and put him in this apparatus, you will find that he will indicate unmistakably its relief. He will breathe easier, the characteristic facial expression of the hunchback will disappear, and all bodily movements will be better performed. Soon his height will increase; and by pursuing a life of constant activity and exercise, a cure or a most gratifying improvement in vigor and form will take place.

What is "rest" for the spine? I define it as a complete reversal of the ordinary function of the spine by active extension.

A treatment by traction and free motion is thus directly indicated and is far more curative and beneficial to the spine itself than inaction or recumbency. A healthy *resistance* is imparted to the entire section, *effectually preventing abscess, and when it has occurred, greatly promoting resolution and the processes of repair.*

The injustice to sound articulations, which involves them in treatment and pseudo-anchylosis intended for *disease* is avoided.

If "rest" can be accomplished without interfering with the normal motion indispensably essential to the health of joints, so much the better. A joint deprived of motion is already diseased; condemned to inaction and loss of function; its "occupation gone," the conditions most favorable to abscess and disintegration are filled. The demand of the joints for motion is as incessant and insatiate as that of the lungs for air, or the heart for blood. "Immobility," "constant fixation," any form of "motionless restriction," or rigid extension is not rest.

The governing principle of this treatment is too well known in its application to analogous diseases of other joints to require any extended comment.

The researches of Henry G. Davis, whose little work on conservative surgery is one of the most original, suggestive, and instructive that the practical surgeon can place upon his table, were the first to show the universality of the great curative principle of "elastic extension" in the treatment of all diseased joints. He "was the first to point out, as an always present factor in their destruction, the existence of unremitting pressure as effected by contraction of the muscles passing over the joints causing constant forcible apposition of the surfaces within the joint." He gave to the world the principle of "elastic extension" and applied it indiscriminately to the spine, hip, knee, or ankle.

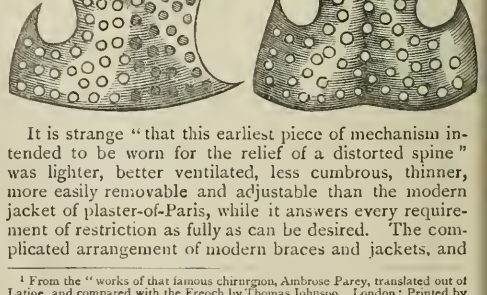
In my opinion this discovery entitles him to an eminence not less than that accorded to the discoverers of anæsthesia or vaccination. I fully believe that if his humane suggestions could be practically carried out, by the instant application of "elastic extension" in all appropriate cases, the hideous deformities arising from the causes under consideration would exhibit a curability at variance with the professional belief.

His apparatus for hip extension and suggestions for treatment have been almost universally adopted by the profession, relieving as they do all pain and spasm, and permitting free motion and recovery without deformity.

"Elastic extension and motion" have robbed this disease of most of its "terrors," as Davis said they would. The terrors of joint disease are pain and deformity.

"As a profession we are not sufficiently aware of the ultimate effect of continued suffering, of how many lives are lost that might have been saved had their surrondings been so arranged as to enable the patient to rest quietly, and to move free from every irritating cause; loss of sleep and rest, loss of appetite and nutrition; themselves sufficient to destroy life" (Davis).

In regard to the spine, he says: "The rational way to treat curvatures is to relieve the spine of the weight of the head and shoulders." But the application of the principle of "elastic extension" to the treatment of the diseases of the spine has never (as in the case of hip-joint disease) passed into general medical practice. The mechanician and specialist "hold the fort" with innumerable restrictive appliances fastened to the wretched bodies of these patients, illustrating all the evils of an ingenious but empirical system of mechanical therapeutics in all the varieties of worthless simplicity, cumbrous complexity, and injurious restriction; in fact, the treatment is practically unchanged since the Hippocrates of France, Ambrose Paré, in the sixteenth century, first suggested the "repoussé jacket" or body splint, beaten out of thin metal and carefully fitted by the skilful armourers of those days. Paré's breast and back plate below sufficiently illustrate the antiquity of restriction.[1]



It is strange "that this earliest piece of mechanism intended to be worn for the relief of a distorted spine" was lighter, better ventilated, less cumbrous, thinner, more easily removable and adjustable than the modern jacket of plaster-of-Paris, while it answers every requirement of restriction as fully as can be desired. The complicated arrangement of modern braces and jackets, and

[1] From the "works of that famous chirurgion, Ambrose Parey, translated out of Latine, and compared with the French by Thomas Johnson. London: Printed by E. C., and are sold by John Clarke, at Mercer's Chappell, in Cheapside Neare ye Great Conduit. 1665."

the constant changes required to keep these defective appliances in order, as well as their notorious inutility and danger, have compelled careful physicians who wish to retain the perfect confidence of families to abandon the "responsibility" of treatment of these cases by methods in vogue; but it has been readily sought and assumed by the specialist. An imperfect appliance always needs a good deal of engineering to supplement radical defects which a good apparatus does not require. Enumeration of the appliances restricting and encompassing the entire trunk in abortive attempts to give support to the spine is simply impossible. Their great number proves their inutility. But the most eminent recent authorities refer to them all as follows: "Mechanical contrivances are much vaunted, and are much employed. I confess, however, to having little faith in their value as curative agents. *They tend to cause atrophy of the muscles instead of strengthening them and thus to make the deformity a permanent one*" (Bryant).

"All the instruments at present so generally used, making direct lateral pressure on the convexity of the curves, must tend to increase the mischief" ("Lectures on the Pathology and Treatment of Lateral and other Forms of Curvature." Second edition, page 296. William Adams, London).

But the principle of "elastic extension" is just as immutable as it is curative. It is just as appropriate for one joint as it is for another, and by its thorough application, unembarrassed by restriction, not only all pain and soreness is relieved, but every indication for mechanical treatment is fulfilled, without peril or discomfort. Every indispensable condition and prerequisite to recovery is thus furnished in a direct and simple manner.

It is evident that if any improvement can be made, it must be in the directness by which the indications for treatment are fulfilled at the precise point where the effect is demanded without compromising normal action or function of neighboring parts.

The natural variability of the spine and the small size of its muscles as compared with those surrounding the hip-joint furnish conditions which render continuous unremitting extension far less imperative. Accordingly it has been demonstrated by careful trials that any supposed necessity for "night treatment" is obviated by daily active extension, and that improvement is more rapid when the natural sleep is not interfered with by any form of restriction or compression.

It is to be regretted that the attention which the magnitude of the misfortune of spine disease must have compelled from physicians in all ages has been so largely devoted to discussions of their supposed strumous or tubercular origin.

In the quest for a cause of the progressive ravages of maladies that contain in their *peculiar location* all the conditions of perennial disease in the constant attrition of the diseased surfaces or the cumulative action of its producing causes, the simple fact that no irritated or abraded joint surface can recover when subjected to constant spasm or pressure is forgotten in the wild and profitless search for an *original sin* of scrofula or tuberculosis.

Regarding so-called "Pott's disease" and so-called "hip disease" as identical in their causes, course, and general characteristics, I intend to supply, for similar reasons, an identical treatment purposing to answer the universal indication for elastic extension, appropriate to any stage, but especially intended for convenient and ready fulfilment of all requirements at the outset of the disease in accordance with scientific authority and sound pathology. There is, therefore, no longer any reason why every practitioner should not undertake the treatment of these cases as of any other lesions that come under observation in the ordinary routine of practice.

There is abundant reason why he should adopt such a course. It is only by immediate, persistent, and early attention to the requirements that deformity can be prohibited or its development arrested. Hence the necessity for recognizing, as a part of the general practitioner's duty, a thorough acquaintance with the early manifestations of these diseases, and the instant or earliest possible application of elastic extension by comfortable, efficient, and unobjectionable apparatus.

330 West Fifty-ninth Street, New York.

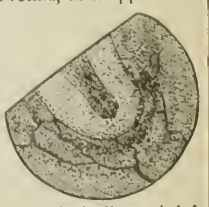
A CASE OF CYSTICERCUS IN THE VITREOUS.

By JAMES L. MINOR, M.D.,

PATHOLOGIST AND ASSISTANT SURGEON TO THE NEW YORK EYE AND EAR INFIRMARY.

During the past summer a patient consulted me at the New York Eye and Ear Infirmary for impaired vision, and I made the diagnosis of cysticercus in the vitreous. The extreme rarity of such cases—not a single authentic case, so far as I am aware, having been observed in America, although Graefe found eighty cases of cysticercus in the deeper tissues of the eye, among eighty thousand patients seen by him in Germany—caused at first much doubt in my mind; but the patient has been frequently and carefully observed since he was first seen, and I am now confident that the diagnosis was correct. And I am strengthened in my conclusion by the opinions of some of my *confrères* of the New York Ophthalmological Society—where the patient was shown—who have seen cases of cysticercus in the vitreous in the European clinics. The patient has repulsed all overtures pointing toward an operation for the removal of the entozoon, and I simply desire to place the case on record, with the hope that I may, at some future time, add the result of the operation thereto.

J. M——, aged sixty, male; seen in July, 1884, when the following notes were made: Ten days ago suffered great reduction in vision in the right eye, which has remained almost unchanged since. Vision in right eye $=\frac{3}{200}$, with excentric fixation, vision being possessed only in the temporal half of the visual field. The ophthalmoscope shows detachment of the retina throughout the temporal half of the fundus. Far forward in the supero-temporal quadrant, just behind the ciliary body, is a cyst, nearly transparent, of ovoid form, which contains (?) a cylindrical mass, apparently about one-half of an inch long, and one-eighth of an inch thick, that terminates in a free, somewhat pointed extremity. Just behind the tip, on either side, is a small black dot—hooklets—and behind these, a slight constriction—the neck—above which, after gradual enlargement, the tongue-like process reaches a point so far forward that it cannot be seen. Two parallel bands of delicate whitish tissue can be traced from the neck up to the point at which the whole object is lost to view. The upper part of the cyst is lost to view at the same point. The retina, as it approaches the cyst, assumes a wavy and wrinkled outline, and presents a mottled appearance, being interspersed with a number of small grayish spots (see figure). The obliquity of the eye necessary for a proper view is such as to make it difficult to distinguish between movements of the globe as a whole and individual movements of objects in its interior. Yet I have satisfied myself—as others have done—that the tongue-like process does possess individual movements. I have observed slight lengthening and shortening, a little lateral movement and tremulousness of the process. The position of the entozoon is such as to make it impossible to establish the exact relation of parts. The junction of the neck with the cyst-body cannot be seen, and the cyst is so transparent that it cannot be positively said whether the head and neck are contained therein, or whether they lie free in the vitreous, just in front of the cyst. I am in-



As seen by the *direct* method of examination.

clined to think that the latter is the case; for with the inverted image a marked parallax can be obtained, which not only shows considerable depth to the cyst-cavity, but that the head and neck lie well forward, in the anterior part of the cyst, or entirely in front of the cyst-wall.

21 Park Avenue.

A NEW METHOD OF MAKING INTRAVESICAL INJECTIONS, AND ITS VALUE IN THE TREATMENT OF CYSTITIS.

By C. W. ROBBINS, M.D.,

MARINETTE, WIS.]

Some three years ago, while practising in Milwaukee, I was called upon to treat a case of gonorrhœal cystitis in a young man. The case was aggravated and chronic; it had already existed seven weeks, and persisted for ten days longer in my hands without improvement with the usual remedies and rectal suppositories. The urine showed, on standing, a large amount of pus and mucus. In bulk the sediment was about one-fourth of the whole amount of urine in bottle (a four-ounce bottle full). Having no instrument for injecting the bladder, I decided to try a Davidson syringe and inject directly into the bladder per urethra. I first injected warm salt-water into my own bladder to test the feasibility of the plan. The fluid passed in nicely, halting only for two minutes at the sphincter. I then, the next time my patient came, injected his bladder with a solution (100° F.) of potassium chlorate and permanganic acid, injecting ten ounces of the fluid, *without causing my patient the slightest pain or discomfort.* The patient held the fluid about one minute, and the injection was repeated. In all, the bladder was thoroughly washed out four times at this sitting. The same treatment was practised the next day, and again on the following day, with the result of curing my patient entirely in the three days. At least all symptoms disappeared, and my patient had no relapse. About that time I removed from Milwaukee to the country and have only had two similar cases to treat since, in both of which the resulting cure was rapid and permanent; one case being cured in three sittings and the other in five sittings. The injection used is the one I have always used in gonorrhœa.

As I use it it is *entirely unirritating.* I use from one to three drachms of the permanganic acid to a half-saturated solution of potassium chlorate, ʒ xvj. The permanganic acid I made myself after the following formula:

℞. Potass. permanganate..... grs. ix.
Aqua destil..... ʒ j.
Solve et adde
Sulphuric acid, C.P..... ♏iij.

This is not strictly a permanganic acid solution, but it will do.

In this brief note I have not gone into details because I am not at all sure that the title at the head of my paper will hold good upon investigation.

If this method of treating cystitis is new and original, I ask of you to give this paper space in your columns, hoping that some of you New York surgeons will test the treatment thoroughly.

Micrococci of Pneumonia associated with Scarlet Fever and Diphtheria.—Dr. Lumbrosa concludes, from the examination of four cases, and culture experiments, that the micrococcus found in broncho-pneumonia occurring in scarlet fever, diphtheria, and croup, although identical in form with that of true pneumonia, is not biologically the same. He was never able to reproduce the disease from the pure cultures. He believes that in infectious diseases the pneumonia coccus has altered properties.—*Le Progrès Médicale*, October 18, 1884.

THE IMMUNITY OF THE NEGRO FROM TRACHOMA.

By BENJAMIN I. BALDWIN, M.D.,

EX-HOUSE SURGEON OF THE MANHATTAN EYE AND EAR HOSPITAL, NEW YORK; SURGEON TO THE MONTGOMERY EYE, EAR, AND THROAT INFIRMARY.

In the last issue of the *Archives of Ophthalmology* there was a good paper by Dr. S. M. Burnett on "The Frequency of Eye Diseases in the White and Colored Races of the United States." The susceptibility and insusceptibility of the negro race to certain diseases is well known in the South. I will not attempt to give a reason for this, nor could I do so in many instances. The principal point which Dr. Burnett makes is the immunity which the negro enjoys from trachoma, and my object is to add my experience to his on that subject. The city of Montgomery is the centre of the great cotton belt of Alabama, and the country which surrounds the city is low and flat, and the soil very rich. This peculiar kind of soil in the South is cultivated almost entirely by the negro, so that we have around us an immense negro population. During the past eighteen months I have treated four hundred and eighty cases of eye diseases among the negroes, and I have yet to find a genuine case of tenement-house trachoma among them. I have kept an accurate history of all my cases, both in private and dispensary practice, and I believe that my data are of some help to Dr. Burnett in establishing an interesting clinical fact. I have seen many cases of papular conjunctivitis due to the lack of proper treatment of ordinary "sore eyes," but this is easily accounted for, as the race is careless about such mild troubles, and medical attention is not easily obtained in remote rural districts in the South. I do not care to discuss the nice distinctions which some analytical writers impose upon us, but that there is a great difference, clinically, between tenement-house trachoma and papular or granular conjunctivitis, due to a mild, protracted inflammation of the conjunctiva, I think, will not be denied. Dr. Burnett says: "If it should turn out that the negro does not suffer from trachoma, even when the surrounding conditions are such as usually develop it in other races, we have a new element that must be taken into account in studying that most important eye affection." Ah! this an important point to look into. Has Dr. Burnett ever found the negro living in *large numbers* under the same conditions which develop trachoma among the poor white element of our large cities? I think here is the place we may go astray in our statistics, if we do not reason carefully. To my mind, the lack of trachoma among the large number of negroes treated by me is explained by the fact that they have been among a class who have had a bountiful supply of fresh air, abundant sunlight, and plenty of exercise. Given a constitution free from any taint, with these elements, together with sufficient and proper diet, I challenge the invasion of trachoma, come what may. My opinion is, and will be till some good argument convinces me that I am wrong, that in all trachoma there is to be found, as a fundamental cause, a dyscrasia. It is true that the negroes of the South are poor, and they are often found greatly crowded in their cabins; yet these cabins are so constructed that there is never a lack of ventilation. I do not contend that trachoma is *never* found in the negro, for I saw one case during my term of service at the Manhattan Eye and Ear Hospital, but I do say that they enjoy a wonderful immunity from it, and I will reiterate that I have yet to find a true case of trachoma among the negroes in my locality in the South.

Montgomery, Ala.

Hydrocele and Cysto-sarcoma Cured by Operation.—Dr. J. M. Adams, of Spencer, Wis., reports a case of a patient, æt. 38, suffering from an enormous hydrocele, the scrotum reaching below the knee. Twelve quarts of fluid were removed from the sac. Incisions were then made, and a tumor attached to testes and tunica, weighing 2¼ lbs., was removed. The patient made a good recovery.

TREATMENT OF CHRONIC HYDROCEPHALUS BY TAPPING—A SUCCESSFUL CASE.

By J. G. PALMER, M.D.,

OAKBOWERY, ALA.

I WISH to report a case of successful treatment of congenital hydrocephalus. The patient was a negro baby, seven months old. I was called to see the child in July last. I diagnosticated the case as one of congenital hydrocephalus, and told the parents that the only hope for cure was in tapping. To this they would not consent. The accumulation continued until the head reached the enormous size of twenty-six inches in circumference—the bones of the head having become very thin by reason of the pressure from within. There was a space of two inches between the bones. The eyes were turned up under the upper lids from pressure upon the brain.

In consultation with Drs. Garison and Spratling the importance of tapping was urged and the parents consented. A small hydrocele trocar was inserted at the posterior portion of the anterior fontanelle, the head having first been shaved at the place of insertion of the trocar.

The fluid flowed freely. About eight ounces were drawn off, the trocar withdrawn, and a piece of absorbent cotton placed over the place of puncture, and held in place by a piece of adhesive plaster. The bones of the head were pressed into position, and held in place by a tightly fitting bandage.

Next day bandage, plaster, and cotton were removed, and more fluid was allowed to drain off, though much had done so during the night by the plaster's coming off and the cotton being moved out of position. The fluid was allowed to drain off at intervals until all was removed.

The child was then put upon iodide of potash, which was kept up for several weeks. The eyes soon regained their normal position. The child nursed well and fattened rapidly. There were some febrile symptoms for several days after the operation, but they soon subsided.

The head is yet big from the large size of the bones, they being very thin. The bones seem to be rapidly uniting, and the child is still fattening and growing.

SUBSTITUTES FOR SAYRES' PLASTER-OF-PARIS JACKETS.

By J. W. KALES, M.D.,

FRANKLINVILLE, N. Y.

IN a recent number of THE MEDICAL RECORD Dr. S. W. Smith brings forward a substitute for plaster-of-Paris for the construction of spinal supports, and urges some objections to the use of Sayres' admirable and original apparatus. The writer having had considerable experience, and having used many kinds of material in the construction of spinal supports, fails to comprehend wherein lies the superiority of Dr. Smith's instrument. How it could have warded off the sad termination of Case I., or have produced less constriction of the chest-walls in Case II., as quoted by the doctor, is not quite clear, provided the surgeon had properly applied the plaster-of Paris splint.

The writer has in his possession a spinal support which was constructed four years ago, and exhibited at the July meeting of the Cayuga County Medical Society in 1880. This support is constructed of narrow strips of tin. It was built over a cast of plaster-of-Paris procured in the usual manner. Part of the strips of tin were placed vertically upon the cast, the remainder of them horizontally, and were soldered at the points of intersection. A wire was run around the edges of the splint, thus forming an almost exact counterpart of Dr. Smith's instrument.

This support is easily and cheaply constructed by any good tinsmith; is light, elastic, appears well on paper, looks well when exhibited before a medical society, and when lined with chamois and covered with some fine material, as silk and lace, up in front, pleases the eye of patient and friends. But having constructed several they have been abandoned. They are metal. The slightest imperfection soon acts like a nail that projects through the sole of a shoe, and it is very difficult to avoid such imperfections. The perspiration attacks the metal, and the oxide of iron attacks the clothing; the patient can remove the splint, and soon it is relegated to the garret. Such has been my experience with metal spinal supports.

If we are to use anything except plaster-of-Paris, we would suggest *leather*. Leather splints are easily constructed by first thoroughly soaking the leather in water and then stretching it over the plaster cast. When dry, remove it from the cast and apply it to the patient. Any imperfection can then be easily corrected. Having secured a *perfect* "fit," finish the support by perforating it to any required extent, line and cover it with any desirable material, lace it in front, attach jury-mast, head-rest, or other desirable attachment. In the writer's hands leather has proved very satisfactory. When the disease is located in the lumbar region the plaster-of-Paris splints do not work as satisfactorily as when the dorsal region is affected.

In one case where the lumbar region was seriously affected, and Sayres' jacket, after many trials, had proved inefficient, and where a splint constructed by one of New York's best instrument-makers completely failed to give adequate support, the writer applied a leather jacket. By extending the lower edge of the jacket over the crests of the ilia and down quite to the greater trochanters, the body of the pelvis formed a fixed point of support. This jacket has been worn for more than a year. The patient has steadily improved, and her friends confidently expect complete recovery.

OCTOBER 22, 1884.

Progress of Medical Science.

PROFESSOR FRERICHS ON DIABETES.—The comprehensive work of Frerichs on diabetes forms the most valuable recent contribution to the literature of the subject. A summary of the author's views is given in the *Centralblatt für die Medizinischen Wissenschaften*, No. 41, 1884. The author distinguishes three principal varieties of glycosuria. 1. Glycosuria after poisons, which constantly occurs after poisoning by curare, carbonic oxide, amyl-nitrite, ortho-nitro-phenyl-proprionic acid, and methyl-delphinin. It occasionally occurs after large quantities of morphia, chloral-hydrate, hydrocyanic acid, sulphuric acid, mercury, and alcohol. Glycosuria after infectious diseases is allied to the above; *e.g.*, cholera, anthrax, diphtheria, typhoid fever, scarlatina, and malaria. In the last-named disease it was only found once in several hundred cases. The appearance of a copper-reducing substance in the urine, observed by different authors after the introduction of various substances into the body, does not rest on the presence of sugar.

2. Glycosuria from digestive derangements. While, as a rule, in healthy persons the ingestion of large quantities of sugar does not cause glycosuria, exceptional cases occur, in which even small quantities have this result. Apart from this, glycosuria is found occasionally in connection with gastric catarrh, especially in those who inherit a gouty disposition. It chiefly occurs during the intervals of gouty attacks. Experiments on the introduction of sugar in cases of phosphorus-poisoning, cirrhosis of the liver, and portal obstruction, gave only negative results as to the presence of sugar in the urine.

3. Glycosuria from nervous derangement. This includes glycosuria after psychic excitation, neuralgia, cerebral disturbance, injuries of the head and spinal column, and, finally, cerebral hemorrhage and cerebro-spinal meningitis.

Diabetes mellitus is distinguished from glycosuria by the appearance of extensive derangements of the tissue-changes generally, which lead to general deterioration, to many local diseases, and usually to death. In

speaking of the results of diabetes, twelve cases of cure are given. It often passes into some other grave disease —nephritis, diabetes insipidus, arterial sclerosis, and their consequences. But death is far the most frequent result; and, of 250 fatal cases of the author's, 18 died from exhaustion, 34 from phthisis, 7 from pneumonia (4 of these with gangrene of the lungs), 8 from nephritis, 7 from carbuncle, and 9 from complications (6 of these from cancer). In all the other cases symptoms of cerebral paralysis appeared, in 10 from hemorrhage, in 2 from softening, in 3 from cerebro-spinal meningitis, and in the rest from coma without local alterations within the skull. Fifty-five cases are reported, together with their necropsies. Passing over the causes, immediate and predisposing, of diabetes, we come to the treatment, which is not so powerless as is often assumed, for the author has had cases under treatment for ten years up to eighteen years, and one case for twenty years. A proper mental and bodily diet is of the greatest importance, and muscular exercise carefully conducted is most beneficial. Milk was found unfavorable, especially Donkin's treatment by skimmed milk. Many alkaline waters were found very useful (Carlsbad, Neuenahr, Vichy), when taken at these places. Among narcotics, opium is important, as it often lessens thirst, urine, and sugar, while the body-weight increases. As to the experience, usually negative, of many so-called specifics, lactic acid had no result, and glycerine was harmful. Salicylic acid, salicylate of soda, and iodoform deserve further trial. All weakening influences and cutaneous irritants are to be avoided.

Infectious Osteomyelitis.—Dr. Rodet has found that when the micrococci of the pus in cases of osteomyelitis are injected into the venous system of rabbits, and therefore free to choose their seat, they show a marked preference for the bones, and more especially for those parts which are in process of active growth, where they set up a severe suppurative or necrotic form of osteitis analogous to osteomyelitis in man.

Sleep, Trance, and Death.—Occasionally we meet with instances in which death is simulated by some deep degree of stupor. The case of a laborer, living at Bridgewater, which was lately recorded, appears to have been one of this kind. The trance-like state developed quite suddenly, and was mistaken by the relatives for death. Some slight degree of warmth in the apparent corpse induced the clergyman in attendance to refuse burial in spite of the decided wish of the relatives that it should take place. After eight days, the signs of animation were re-established, and the subject of this singular experience slowly recovered. In all such cases, there is an element of mystery; and one cannot always decide how much of this is due to physiological or pathological conditions, or to some external agency. The *British Medical Journal*, in commenting upon the above case is led to make the following remarks: "The relationship between sleep, 'the cousin of death,' and death itself, is probably real as well as apparent. The distance which separates them is great, but there are intermediate connections, grades of dissolution as of development. Among these the similar states of trance and hibernation are worthy of special notice. For sleep and for trance one cause, the exhaustion chiefly of nervous matter, but more or less of every organ and tissue, is assignable. The hysterical stupor is the sleep of nerve-centres, worn out with the assault and conflict of stormy reflex action. Healthy sleep is the rest of physical elements wearied with the same strain applied more gradually. Cases have been recorded in which somnolence, continuing for days without cessation, has resembled trance in its duration, while preserving all the ordinary features of natural sleep. Various facts support us in associating the hibernation of animals with the same train of organic or functional changes as the other unconscious states which we have been considering. It comes like a habit; it has, one may say, annual return; its apparent cause is the oppression of external cold, and the animals it affects are mostly those which, from their bodily structure or habits, are subject to great periodic variations of temperature. Vital tissue is exhausted, and function is in part suspended, probably because the numbness of cold has taken hold upon the radicles of the outer circulation, and of that of the brain-surface which is connected with it by numerous anastomoses. In such a case anæmia would seem to be the cause of the winter sleep, as there is evidence to show that it is also the cause of that temporary starvation of brain which lulls without arresting its action, in the natural repose of each night. We may even regard the lethargy, ended by death, into which man falls when exposed to great cold, as a short and mortal hibernation. The same influence acts upon him as upon the bear or fish, but the power of its shock is greater on his finer and less accustomed senses than on their comparatively coarse organization. So, likewise, in other regions and forms of life, in the weariness, paralysis, atrophy, and gangrene of limbs, in the leafless hibernation of trees, and in their decay, beginning in the terminal twigs, the same teaching is evident, that vascular nutrition, in its periodic variations, is the parent of activity, and of rest, as its absence is of death."

Adenoma of the Liver in a Child Twenty Months Old.—A remarkable instance of this rare disease is found in the yearly report of the St. Joseph Children's Hospital in Vienna. A female child had suffered for three months with loss of appetite, emaciation, and swelling of the abdomen. The right side of the abdomen was occupied by a tumor reaching from the sixth rib to the iliac fossa, and on a line with the umbilicus from the linea alba to the vertebral column. Palpation showed elevations over the surface of the liver from the size of a horse-chestnut to that of a child's fist. They appeared soft when pressed against the resilient liver. There was also enlargement of the spleen, and the urine showed albumen. At the autopsy the liver was found to weigh over three pounds. Its surface was covered with knobby tumors of various sizes. Section showed the liver substance to be entirely replaced, with exception of its periphery, by a soft yellow mass sprinkled with numerous hemorrhagic points. It was separated from the resistant liver tissue by a thin capsule. Connective tissue septa ran through the mass, indicating that it had been formed from a number of confluent tumors. There were, besides this large mass, tumors from the size of a pea to that of a walnut scattered over the periphery. Some were so soft that they almost fluctuated. Careful microscopic examination showed the growth to be an atypical adenoma.—*Wiener Medizinische Wochenschrift*, No. 43, 1884.

Sudden Death in Labor and Childbed.—In the course of some remarks on the above subject, Dr. Lusk (*Journal of the American Medical Association*, October 18, 1884) observes that modern pathological investigation refers the phenomena of shock to a reflex paralysis of the vaso-motor, and especially of the splanchnic nerves, whereby the great mass of the blood is withdrawn from the surface, and collects in the large trunks of the cœliac, the mesenteric, and the renal veins. Hence the skin becomes cold and is devoid of color, save at the points where a bluish hue is imparted by the stagnant blood still lingering in the veins; the muscles deprived of blood become enfeebled; and the empty vessels of the brain explain the sluggish intelligence, the nausea, the vomiting and the indifference of the patient; finally, during the diastole, the heart, pale and contracted, receives but little blood, and the radial pulse fades to nothingness, because a corresponding small amount of fluid is propelled during the systole into the arterial vessels. From works on military surgery we learn that it is in the defeated army among homesick soldiers, at the close of a wearisome war after great exertions and deprivations, that shock is developed in its severest forms; that the finer the organization, the more readily the manifesta-

tions occur; that they are promoted by sudden losses of blood, and are in a special degree evoked by abdominal injuries. It certainly would be singular if similar conditions in childbed were not followed by corresponding results. After prolonged labor, the woman has her nervous system depressed by pain, starvation, and deprivation of sleep. The sudden emptying of the uterus is followed by a recession of blood to the venous trunks of the abdomen. Hemorrhage subsequent to parturition is followed by syncope, and the wonder is, not that the circulation should occasionally show the evidences of marked and even fatal disturbance, but that the nervous system, attacked from so many directions, should, as a rule, triumph over the adverse forces. In the old days of torture, shock often mercifully put an end to the victim's anguish. Women in childbirth are at times subjected to pain exceeding that of the rack and the thumb-screw. Now it is not sound pathology to ignore these facts, and to banish as unworthy of consideration a well-established pathological condition, simply because in the days of ignorance the terms exhaustion and shock were indiscriminately employed to explain a multitude of cases, which, with our present enlightenment, we know are due to the entrance of air into the circulation and to pulmonary embolism. As the nervous organization of women loses in powers of resistance as the penalty of a higher civilization and of artificial refinement, it becomes imperatively necessary for the physician to guard her from the dangers of excessive and too prolonged suffering. Especially I would raise my voice in warning against the current opinion that the length of the first stage of labor before the rupture of the membranes is a matter of indifference, a teaching which I believe has cost the lives of many women; in a few, death resulting from shock; in more, the exhausted condition in which the woman is left after childbirth rendering her an easy prey to the perils of the puerperal state.

Lipoma of the Arachnoid.—Dr. Braubach records a case of lipoma of the arachnoid of the cervical cord, extending to the point of exit of the fourth and fifth dorsal nerves. The cord was completely compressed and displaced to the left side. Below the region of compression there was descending degeneration of the pyramidal columns. Lipoma is very rare in this situation. Very few such cases have been recorded: one by Obré, one by Athol Johnson, one by Virchow, and a case of myolipoma by Gowers. The paraplegia of the lower limbs, their anæsthesia, the bladder weakness, the extreme contraction of both lower extremities, the increase of their tendon reflexes, need no comment. They depend partly on the compression of the cervico-dorsal cord, partly on the descending secondary degeneration of the lateral pyramidal tracts. Of greater interest is: 1. The fact that, in spite of the extreme compression and degeneration of the affected part of the cervico-dorsal cord, the conduction through it, at any rate of intense impressions of pain, was still retained. 2. The fact that, in spite of the great degeneration of the compressed parts, the roots on the right side that came off from these affected regions showed only very slight degeneration, the roots on the left side none. 3. The fact that the left upper extremity could be moved as in health, without any paralysis or contraction; while the right arm was paralyzed and extremely contracted. The latter symptom was, doubtless, due to the great amount of stretching of the right spinal roots, in consequence of the displacement of the cord to the left; and a permanent state of irritation was present throughout, which gave occasion to conic contraction of the right upper extremity.—*Archiv für Psychiatrie und Nervenkrankheiten.*

Bony Tumor of Brain.—The formation of true bony growths in the substance of the brain is believed to be of rare occurrence. It is possible that the apparent rarity is due to the infrequency of post mortem examinations of the cranial cavities of senile individuals. M. Witkowski has placed on record some of the particulars of an example of osseous tumor of the brain. The morbid growth was of the size of a walnut and occurred in the left hemisphere at its occipital part; it was quite independent of the pia mater or ependyma, being surrounded on all sides by brain matter. Its shape was like that of two pyramids set together at their bases; its surface was studded with a number of spicules, points, and folds, the last of which had a certain resemblance to the convolutions of the brain. The tumor was encased in a fibrous capsule, and presented many excavations filled with brownish or yellowish soft material, which was discovered on microscopical examination to be of the same structure as the marrow of bone. The fibrous capsule or periosteum of the tumor was composed of a dense connective tissue, calcified in parts. After the tumor had been decalcified by treatment with chromic and nitric acids, a hyaline ground substance was brought into existence, and lamellæ with bone corpuscles and Haversian canals were to be seen. The tumor was connected with the nervous substance by means of a delicate connective tissue strewed with amyloid corpuscles. There were no other osseous formations in any part of the central nervous system. The brain on the same side as the tumor was certainly more consistent than the right hemisphere, and the microscope exhibited an increase in the amount of connective tissue and stellate cells. The cerebral arteries were extensively thickened, and many small foci of the brain were in a state of softening. Some degree of internal and external hydrocephalus was found, and the ependyma was thickened. The brain was that of a man, aged seventy-nine years, who had never shown any symptoms of brain mischief during life. No accident could be assigned as the cause of the formation, which does not appear to have been an ordinary psammoma.—*London Lancet.*

Fatal Puerperal Infection in the Male.—Dr. Gandor reports this case in the *Revue de Médecine*, No. 9, 1884: A healthy man waited on his wife after her confinement. The woman died of puerperal septicæmia; the man developed a lymphangitis, preceded by chills, simultaneously, in one arm and leg. Soon all the symptoms of septicæmia appeared, and the patient rapidly sank, but rallied at length and made a tedious recovery. No wound or scratch of any kind had existed on his hand or foot to account for the origin of the lymphangitis. The author concluded, therefore, that the case was one of puerperal infection in the male. But he fails to explain in what manner the poison entered the system.

The Rose-colored Eruption not Characteristic of Typhoid Fever.—Dr. Juhel Rénoy relates in the *Archives Générales de Médecine* for October, 1884, two cases in which the typical rose-colored eruption was present, but in which there was no typhoid fever. In one case there was diarrhœa and fever, but the temperature curve was not that of typhoid, and at the autopsy no typhoid lesions were discoverable. The author concludes, therefore, that the presence of the rose-colored lenticular spots is not necessarily a sign of typhoid fever, since the eruption may occur in other febrile conditions. He suggests that possibly the eruption is due to some derangement of the cutaneous secretion.

A Point in the Differential Diagnosis of Variola and Varicella.—Dr. C. Bareggi withdrew a little of the fluid contents of variolous papules and pustules, and having made dry preparations in the ordinary way, and stained them with methylene blue, examined them under the microscope. He found large numbers of cocci, like those described by Klebs as characteristic of variola. The author was unable to find these microbes in papules or pustules of any other origin. They were absent in chicken pox, which fact would tell against the theory of the identity of varicella and variola, and might also be of value in the differential diagnosis of these two diseases.—*Centralblatt für Klinische Medicin.* No. 38, 1884.

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IS BLOOD-TRANSFUSION JUSTIFIABLE?

THE history of transfusion illustrates very forcibly the quick rise and fall in popularity of measures that do not rest on the sure basis of exact knowledge. It is within the memory of even the younger members of the medical profession that the transfusion of blood was regarded as one of the most important operations of modern surgery. Of scarcely a single other procedure was it said with such positive assurance that it constituted a grand life-saving triumph of the healing art. Yet to-day blood-transfusion is about to be relegated by unerring science to that still extending limbo of futile, if not harmful surgical interference. Professor v. Bergmann (London *Medical Record*, November 15, 1884) [1] has recently published a critical survey of the entire subject, but more particularly of the history of transfusion within the past decade. He starts out with some general observations concerning the commendable prevalence among physicians of habits of keen inquiry and searching investigation. The practical and fruit-bearing discoveries in modern medicine—especially as regards surgery—rest, he thinks, on the safe foundation of biological knowledge. This is as it should be. For whenever serious medical action does not conform, to what is really known, mistakes are sure to happen. Transfusion shows this very well. The author recalls the fact that centuries before physicians had any knowledge of the circulation of the blood, they tried by this bold measure to supply new vital fluid to the human body. According to the then prevalent idea, blood was equivalent to life and soul. Almost complete ignorance of the true function of blood made them attribute to that fluid all the mysterious manifestations of life.

It is not surprising, therefore, that we find in the seventeenth century not only individual physicians, but whole colleges and other learned bodies, seriously discussing the question whether a dog would get wool and horns after taking sheep's blood, and whether the disposition of sanguine or choleric persons could not be improved through the agency of gentle lamb's blood. Transfusion, it was also thought, could rejuvenate the aged. The introduction of the blood of one animal into the circulation of another was carried out in a variety of ways in the eighteenth century. Experience gained by this means showed that an animal nearly dead from loss of blood may be resuscitated, at least for the time being. But human transfusion was rarely done until about the second half of our century, when for a short period it suddenly rose to rather startling frequency. The operation was not confined to cases of sudden loss of blood. On the contrary it was often performed for all kinds of acute and chronic diseases. Patients were also bled to rid them of vitiated blood, and thus prepare them for the introduction of healthy fluid. Pulmonary and renal affections, dyspepsia, pyæmia, typhus, and cholera were treated by this method. No wonder, then, that grave mistakes, often fatal in their consequences, soon brought transfusion into discredit.

In 1859, its successful employment by Martin, of Berlin, in lying-in cases, once more revived its popularity, until about ten years ago it was looked upon as a universal panacea for the greatest variety of human ailments. But to-day this kind of unstinted enthusiasm has died a natural death. The more or less complicated apparatus of the transfusionist has been quite generally set aside. Perhaps it will soon be found only among the historical relics of a past era in medicine. Certain it is that we know much more about hæmatology than we did even a few years ago. And the mistakes that have been associated with the practice of transfusion are not likely to be again repeated.

In any great and sudden loss of blood, the arterial blood-pressure sinks so low that the movement of the blood is stopped. For a time the heart still works on, but ineffectually. It is like an empty pump, and ceases to draw and propel the column of blood. In the vascular system there is stagnation. Were the blood which the vessels still contain put again into motion, it would be sufficient to support life. Hence, as Kronecker first pointed out, in such cases a simple infusion of a saline solution is sufficient to save life. By this means the contents of the vascular system become increased in volume. This intensifies the intra-vascular pressure and re-establishes the working of the heart. Now we understand why in so many cases transfusion has saved life; why Lower's and Boyle's rudimentary experiments on dogs were successful. What was required was to fill the elastic tubes of the vascular system with fluid, not necessarily with blood.

Again, after considerable loss of blood the proportion of blood-corpuscles remaining in the blood becomes less and less, and for a variable time after the bleeding has ceased the diminution still goes on. Subsequently to the transfusion of a large quantity of blood the blood-corpuscles seem to be increased, but only for a time. Very soon their number diminishes, while the urea and alkaline elements of the urine, and the deepened color of the latter, betoken the ruin and disintegration of the blood and its corpuscles, which have been conducted in excess into the system.

The scientific study of the subject was much advanced by the counting of blood-corpuscles, but even more so by the results of the direct transfusion of animal blood. Supported by the apparently remarkable cures of Hasse, it quickly became a favorite measure. It seems scarcely credible how tenaciously physicians clung to this form of the operation even up to the close of the last decade.

After every transfusion with lamb's or dog's blood, the patients develop a series of morbid symptoms. First there is dyspnœa, followed by a feeling of being over-full, then

[1] Die Schicksale der Transfusion im letzten Decennium, Berlin, 1883.

sickness, and afterward sinking and uncontrollable stool-pressure. There are also headache, dizziness, and even short periods of unconsciousness. From ten minutes to an hour after the transfusion a chill will set in, often increasing to a violent shivering fit, then a stage of heat, with very high temperature. The hæmaglobinuria already mentioned is the direct result of the dissolution of red blood-corpuscles. We can scarcely understand to-day how many observers, in the face of such serious disturbances, could disregard the manifold dangers of transfusion with foreign blood. Their only apparently justifiable reason seems to have been, that one case after another of transfusion with lamb's blood seemed to be successful, or more correctly speaking, that the patients did not quite die.

The injurious effects of transfusion with foreign blood were attributed by Prevost and Dumas to the unequal size of the blood-corpuscles in different kinds of animals. As the blood-corpuscles of a sheep are smaller than those of man, they were considered harmless. To Ponfick must be given the credit of showing how erroneous this was. It is not the mechanism of the different-sized corpuscles that makes foreign blood injurious, but rather important chemical changes, which, when a certain quantity is transfused, makes the blood of a sheep a deadly poison to a dog, and *vice versa*. A complete answer has been given to the question as to what the harmfulness of foreign blood consists in. And henceforth, v. Bergmann thinks, this kind of transfusion should disappear from the stock of surgical remedies.

Long before Panum pressed upon the attention of physicians transfusion with defibrinated blood, Magendie had found by his experiments on animals that such blood caused decided disturbances, such as quick breathing, diarrhœa with tenesmus, and bloody effusions into the peritoneal, pericardial, and pleural sacs. Accordingly, he warned the profession against its use. It is easy to understand why physicians did not altogether follow him, because in direct transfusion there are the numerous risks of coagulation attending the use of syringes and canulæ. Virchow, in his work on "Thrombosis and Embolism," did not in connection with transfusion set forth these dangers, or else he under-estimated them. At the present moment, they form the principal objection to the only permissible form of blood-transfusion, namely, that with human blood intact.

The idea of plethora with increased blood-pressure after transfusion for the cure of certain diseases gave rise to the practice of bleeding the patient before the operation. Especially in treating septicæmia in this way, a large quantity of blood was taken from the patient in order that it might be replaced with new blood; doubtless a double injury to the patient, first by the blood-letting, and secondly by the transfusion. These operations nearly always proved fatal. But, at any rate, they showed the non-existence of increased blood-pressure as a cause of the fatal ending.

Whenever transfusion with blood has saved life, it has done so by starting a sluggish or stagnating blood-current to quicker motion, and not through any reviving respiratory action of the blood-corpuscles. It is owing to two things that transfusion has often passed off without danger, and has even been endured without much disturbance. The first is the small quantity of blood, usually not much exceeding one ounce, that was employed. With this they tried to cure phthisis, chlorosis, and chronic intestinal catarrh. The second is the power of resistance of the organism against the effects of the fibrine-ferment. If, however, transfusion carries with it grave dangers, we are forced to the conclusion that we are on the wrong track. All that can be effected by the operation can be effected by other and simpler means, namely, by infusing into the veins a solution of common salt. It has been established by numerous cases that, when transfusion of a solution of common salt is used it revives the patient and causes the heart to beat. It is conceivable that a patient may be revived by something injurious. But if it can be done by something that is harmless, we should welcome the latter. There is only one kind of blood-transfusion that can really be justified: the transfusion of blood from the artery of one man directly into the vein of another.

Experiments have been made to convey fluids to the blood by other means than transfusion. But they have proved barren of lasting benefits. Thus, when it became known that fluids are sometimes rapidly absorbed by the peritoneum, the attempt was made to replace transfusion by flooding the peritoneal cavity with defibrinated blood. The lymphatics seemed to eagerly absorb notable quantities of it. But hæmatic icterus resulted, and the urine soon showed the presence of uro-obilin. Intraperitoneal transfusion is, therefore, unjustifiable.

If we accept v. Bergmann's teaching, and certainly he makes out a strong case, it would seem that blood-transfusion is really a thing of the past. On the other hand, the introduction of some saline solution into a vascular system threatened with profound stagnation, would be a substitute that is free from the manifold dangers inseparable from the older method of transfusion.

THE ATTACK UPON DR. FORDYCE BARKER.

It is with the profoundest regret that we chronicle the proceedings of the New York Academy of Medicine of last week. The wanton attack upon the venerable President furnished an exhibition of impotent spite and stupid malevolence quite without parallel in the medical annals of this city. A distinguished physician, who has practised his profession blamelessly for thirty years, whose high qualities of character have drawn about him an ever-increasing troop of friends, whose professional attainments have won for him the most distinguished honors at home and abroad, who has been justly looked upon as one of the best types of American physicians, and who in his later years has, by self-sacrificing and assiduous efforts, raised the Academy of Medicine to be the foremost medical society of the country—this man is at last made the victim of a baseless charge that he has been a life-long hypocrite, that he is not legally a doctor! The infinite pettiness of mind which could trump up these accusations, so easily proved false, is quite past comprehension.

Neither can we understand how men, who have been posing as representatives of a high professional morality, should so blindly give the lie to their pretensions by devising and giving publicity to a contemptible slander

upon a brother physician; for it is not alone that the character of Dr. Barker was impudently assailed—that gentleman has been too long known and too widely honored to be harmed by the slander brought against him—but the profession itself has been injured by the publicity given to a disgraceful and unnecessary quarrel.

The medical profession at large will hear and judge who best represents the true standard of professional honor, Dr. Fordyce Barker or those who have again so wantonly fomented discord, excited bitterness of feeling, exposed our dissensions to the world, and maliciously attempted to injure a physician than whom no one more deserves to be honored at our hands.

THE THERAPEUTICAL VALUE OF ELECTRICITY.

Two papers of interest, by Dr. Hughes Bennett and Dr. W. E. Steavenson, respectively, were read at the last meeting of the British Medical Association. They treated of the somewhat hackneyed subject of electro-therapeutics, but the points made in them and the discussion which followed drew out some thoughts which deserve attention. They showed for one thing that in England as in this country the general practitioner knows very little about electricity, and does not trouble himself with it much in his daily practice. Further, Dr. Steavenson expressed the opinion that the cost of an electro-therapeutical "plant," the expense of keeping it in order, and the time occupied in applying electricity would in time throw a large part of electro-therapeutical work into the hands of specialists, or of electricians who would rank with cuppers and masseurs, doing just what was directed and no more.

Such an arrangement will be slow to occur in this country because, even if it were desirable, our sick population is too scattered to support "electricians," except in the large cities.

Nevertheless, there is unquestionably a tendency in this direction of electro-therapeutical specialization. Physicians in general practice, who have batteries, and who know perchance how to use them, are generally too busy to make applications as they should be made. A call of ten minutes must be extended to half or three-quarters of an hour, and his patient will not pay him in proportion to the time expended. The consequence is that nine out of ten of the medical batteries of the general practitioners throughout the country are at the present moment rusting in the closet, the fluid evaporated, and the zincs eaten up.

But there is a wide-spread belief among the *commune vulgus* that "electricity is life." The buzz, the thrill, and the flashes of the battery sustain this biological conviction, warm the imagination, and excite confidence and hope, even if they do not really cause a cure. The doctor must often have a battery to satisfy his patient; and he can actually help him by its psychical effects.

There is probably a steady increase in the use of electricity among American physicians. Instrument-makers inform us that they sell more batteries every year. An intelligent knowledge of what electricity will do has not, however, kept pace with the highly profitable industry of making and mending batteries.

Consequently electro-therapeutics in the hands of many touches on the borders of charlatanry. The claims made for it, even by reputable physicians, are often preposterous. Absurd theories as to its action are advanced, and its practical applications are made without discrimination or skill.

Those who have written most carefully and conscientiously upon electro-therapeutics have shown that its usefulness is more limited than was first believed, but that within its limits it has a remedial power which is unequalled. Scientific investigation has also shown that electricity in diagnosis gives us a precision and help attainable in no other way; and electro-diagnosis is a field which charlatanry does not care to touch.

In practical medicine electricity is of most value as a counter-irritant, a mechanical stimulant and a general tonic. In rheumatic pains and certain forms of neuralgia and in functional asthenic states it does its best work. In paralysis it is a mere symptomatic remedy, much overrated, and generally disappointing. Its power to modify in the slightest degree organic cerebro-spinal diseases is a thing still *sub judice*.

The teachers of medicine in our medical colleges are generally men who are too busy to use electricity, and consequently they know little about it, even its diagnostic value. It would be a wise thing for the colleges to give more of practical instruction regarding the subject, if only to warn students against in future "listening with credulity to the whispers of fancy or pursuing too eagerly the phantoms of hope."

Successful and honest electro-therapy means an expenditure of money, time, and skill.

Dishonest, though perhaps successful, electro-therapy means the indiscriminate buzzing of a vibrator in the ears of every credulous and hypochondriacal visitor.

THE VALUE OF LOCAL MEDICAL JOURNALS.

A Southern contemporary complains that Southern men subscribe for Northern journals, but that Northern men do not subscribe for Southern journals. Granting that this is true, we would say to our Southern brother that men will go where they can get the most and the best for their money, and that no complaints or grumbling can alter the law of supply and demand. Medicine is a cosmopolitan science—it knows no South or East or West. The human race is one, and the laws governing its diseases are the same everywhere. An inflammation, a cancer, a colic, affect alike Hindoo, Hottentot, and, in all respect, our Southern medical editor. The true physician, therefore, will encourage whatever tends best to help along his science and art, and will not hamper progress for the sake of gratifying local pride.

At the same time, we fully believe in the great value of local medical journals, and would urge their generous support (if they are worthy) by the profession. For it is true that somewhat different diseases prevail in one country from those in another, and that race, climate, and other factors may modify slightly the physiognomy of the same disease. Local journals may be of service in interpreting these differences. But, more than that, the local medical journal has an important function in uniting the physicians of a State, in making them known to each other, and in organizing and helping forward movements for the improvement of the profession.

If our contemporary would ask for support upon

grounds such as these, instead of appealing to sectional prejudice and complaining of others' success, it would doubtless receive, and would certainly deserve, a hearty response.

THE NEW YORK ACADEMY OF MEDICINE.

It must now be apparent to all that hostility to this most important institution has been nearly as strong a moving force in causing the recent attempt of a half-dozen malcontents as the bitter hatred of its President. Very many who were dragooned, by specious pretence and plausible fallacies, to attend the meeting of the Academy in April, 1883, and vote for a measure which would have stopped its work and its usefulness, from the conviction that they were thus doing their best to maintain the National Code, have expressed not only their regret but their deep disgust, when they have come to see that they were not working for principle but for the gratification of personal malice. The few words from the President, on resuming the chair, tell the whole story, and were so devoid of personal feeling, and in such excellent taste, that we deem them worthy of being again repeated in this connection: "The Academy will now resume its scientific work, which it has so zealously, efficiently, and harmoniously carried on for thirteen months, until now interrupted by this supreme effort to elevate the character of the medical profession."

THE MEDICAL PROFESSION OF THIS CITY.

The question is often asked by those from other parts of the country, "How is it that such fights are going on in your city, which shock us who do not comprehend them? There is the same diversity of opinion in regard to the necessity and utility of the National Code as with you, but it has never assumed such proportions as with you. It does not break personal friendship, nor do any of us think that sound ethics, the honor of the profession, or its standing in the community, can be best promoted by personal abuse, detraction, or calumny." Some good always comes out of evil. The reproach will now be wiped out. The audacity of four or five, in assuming to be leaders of the City and State in all active movements, speciously but avowedly for the support of the National Code, has now shown them to be the most notorious and conspicuous violators of its spirit. The President of the Academy has, and always has had, as warm friends in this city among the avowed advocates of the Old as of the New Code. In other cities and other parts of the country it is probable that a majority of the prominent men in the profession, who are his friends, are pronounced advocates of the Old Code. The mask of honest purpose has now been torn away from such dangerous leaders, and the true visage of implacable, unrelenting, and unprincipled malignity has been revealed in all its hideousness. We feel assured that among the two thousand (?) physicians of this city and Brooklyn not fifty can be found who are not in hearty accord with this view.

It is, perhaps, worthy of mention that not one of the leaders in the recent events, which have so stirred the profession of this city, is known as an active, much less as a prominent, practitioner of medicine.

BELLEVUE HOSPITAL MEDICAL COLLEGE.

The announcement of the Faculty of this College for two years past has conspicuously inserted this sentence:

"The standard of Medical Ethics recognized by the College is embodied in the Code of Ethics of the American Medical Association."

No other colleges, so far as we have noticed, have felt it necessary thus to advertise their goodness. It was a novel bid for students. As a matter of taste, it seems as absurd as it would be for a lady of good social position and unblemished character to inform all that she met that she was virtuous.

It was undoubtedly believed to be a politic move; whether it has proved so or not can only be determined by comparing the number of students of two years past with the number the two years before, and also comparing these numbers with those in the two other colleges of this city during the same period.

But the question is now asked, whether this standard is intended to apply only to students, or is to have equal force in regulating the Faculty. Tacit acquiescence in the conduct of one of their number, who, by his extraordinary and unparalleled efforts as a volunteer police detective in a foreign country, obtained a kind of negative evidence which would never have been admitted in any court of law in proof of a charge, but would, if not refuted, have a kind of moral force to tarnish the reputation of another member, who is at least the peer of any member of the Faculty, will answer the question. If the Faculty are in doubt in regard to the matter, they may perhaps study with profit a very able commentary on Ethics by another of their number, which first appeared in the New York *Medical Journal*, and was afterward published in a separate volume.

THE FIRST TOTAL REMOVAL OF THE CEREBELLUM IN A DOG.

Professor Luciani has succeeded, by infinite care and the strictest application of modern surgical principles, in totally removing the cerebellum of a dog without destroying life. This single success seems likely to sweep away a world of carefully built hypotheses regarding the function of the cerebellum. During the stage of healing and irritation inco-ordination symptoms appear, similar to those usually observed in birds. As recovery advances, however, these disappear, and a kind of muscular asthenia or loss of tone takes its place.

The experiment confirms apparently the views of Herbert Spencer, Jackson, and Ross, as to the "tonic" innervation of the muscles by the cerebellum.

The description of the effects of the operation is well given in the *British Medical Journal*, which says:

"When healing is finished, the so-called inco-ordination (contractures and pseudo-paralytic debility) disappears, the animal can walk for longer and longer distances without falling. What strikes the observer is the deficient proportion, firmness, and tone of the individual muscular contractions, and their want of fusion; in a word, a kind of 'cerebellar ataxy,' difficult to describe accurately. This disorder of the movements is not, as the 'inco-ordination' of the first period, sufficiently serious to prevent the animal from effecting its various voluntary acts; and,

upon closer investigation, resolves itself into a kind (not of paralysis nor paresis, but) of motor 'asthenia.' For instance, if, instead of walking, the dog were made to swim in a pond, then its movements were perfectly normal. Not the least sign of want of equilibration was noticeable; the four limbs acted with ease, the animal being propelled in the water just as it had been noticed to do before the operation, showing a full co-ordination and adaptation of the individual movements necessary to the performance of the action. But, on arriving at the edge of the pond, the dog was unable to get a footing, in spite of its efforts. Professor Luciani lays stress upon the great difference between the normal behavior of the dog while swimming, and its disturbed motility when performing acts requiring a greater development of muscular energy; and concludes that the 'cerebellar ataxy' just described, is merely a manifestation of a kind of motor asthenia, that is to say, of the insufficient muscular tone, or influence exercised by the nerve-centres upon the voluntary muscles."

THE ALLEGED "VACCINE" AGAINST YELLOW FEVER.

The *Daily Times* gives as news some account of the discoveries of Dr. Domingos Freire regarding the discovery of a yellow fever germ and yellow fever vaccine; and our contemporary wonders why the discovery does not attract more attention. Some of our medical contemporaries have also been heralding the discovery as something very new. The fact is, however, that Dr. Freire wrote a very full account of his work to the *Sanitary News* several months ago, and long before M. Bouley presented the subject to the Académie de Médicine. At an earlier time we gave an abstract of his conclusions, and added the opinion, which we still hold, that Dr. Freire has yet to win a reputation as a trustworthy observer. Some of his previous "discoveries" in bacteriology have turned out to be no discoveries at all.

THE A. C. E. MIXTURE, NITROUS OXIDE, AND ETHER.

In one of the periodical discussions upon anæsthetics which recently took place before the London Medical Society, some more than ordinarily useful facts and conclusions were drawn out. These may be formulated as follows:

First.—British surgeons are giving up the routine use of chloroform, except perhaps with children.

Second.—The A. C. E. mixture was shown to be safer than chloroform, and almost as safe as ether, while more convenient. This mixture is composed of one part, by measure, of alcohol to two parts (measured) of chloroform and three of ether. This mixture should be made afresh just before being required for use. A drawback to its employment, though a small one, is that, in practice, it is found to act a little less rapidly than chloroform in the production of insensibility. It requires no complicated apparatus for its use, being doled out drop by drop on a napkin; and, as an accumulating experience of many years in several metropolitan hospitals appears to testify, it is superior in point of safety for adult patients to chloroform alone. The exhilarating effects of the three parts of ether appear, in practice, to counterbalance the properties of the two parts of chloroform as a cardiac depressor.

One surgeon, Mr. Estes, uses chloroform for young children and the A. C. E. mixture for persons between the ages of six and eight and sixteen and eighteen.

Third.—For safety no anæsthetics equal ether and nitrous oxide.

Fourth.—For both safety and rapidity, no other anæsthetics equal nitrous oxide gas and ether given together. The only objection to this combination appears to be connected with the apparatus that has to be employed. It is bulky, and demands a larger initial outlay than practitioners throughout the country, who seldom require to administer anæsthetics, would be disposed to incur. Still, for all who can employ them, nitrous oxide used with ether possess advantages not found in any other single anæsthetic agent, or combination of agents, at the present day known.

News of the Week.

Medico-Legal Science in New York City.—At the last meeting of the New York Medico-Legal Society, Professor R. Ogden Doremus was elected President. At the last meeting of the Society of Medical Jurisprudence, Dr. Frank H. Hamilton was elected President. Both of these Societies have been working hard during the past year, and have succeeded in attracting a good deal of attention to medico-legal subjects. The Society of Medical Jurisprudence is the result of a protest against, and a "bolt" from, the Medical-Legal Society and its management; and is hampered only by its youth. The Medico-Legal Society has been seriously, if not irretrievably, injured by the fatuous ambition of a lawyer who seems to have no other aim in life than to be its president and manager. It is much to be hoped that under Professor Doremus the Society may regain some of its lost prestige.

Aseptol, a New Antiseptic, says M. E. Transer, has for its scientific name orthoxyphenyl—sulphurous acid. It is an acid phenol, capable of neutralizing ammoniacal bases. It is said to be preferable to phenol as an antiseptic, because it possesses the decided advantage of not being poisonous.

In the Death of Dr. Edward Jarvis, which occurred recently, in the eighty-first year of his age, the medical profession has lost one of its most useful and distinguished members. From an interesting account of his life in the Boston *Medical and Surgical Journal*, we learn that Dr. Jarvis was one of the members of the Corporation of the Perkins Institution for the Education of the Blind; he was Superintendent of the School for Feeble-Minded Youths; Trustee of the Worcester Lunatic Hospital; Consulting Physician to the New England Hospital for Women and Children, and for nearly a third of a century President of the American Statistical Association. Dr. Jarvis was the earliest petitioner to the Legislature for a State Board of Health. He labored year after year, early and late, for its establishment, and he did his best to support it by zealous work. His enumeration of the insane in Massachusetts (Report of 1854),

his essays on political economy, social science, and statistics, and his valuable contributions to the United States Army Reports, gave him well-deserved reputation as a statistician in this country and in Europe. As a kind-hearted citizen and philanthropist, Dr. Jarvis was ever ready with sympathy and help for every person and good cause that needed them, and his public spirit was shown to the last in the gift of his valuable collection of books and reports to Harvard College, the American Statistical Association, and the public libraries of Concord and Boston. He also gave $500 each to Harvard College and the Statistical Association.

The Ohio State Sanitary Association holds its second annual meeting at Columbus, O., February 5 and 6, 1885. The Secretary is Dr. R. Harvey Reed, of Mansfield.

Antipyrin is said to be the most popular of the new antipyretics, and has been the one most imported.

The First Enucleation of the Eye Under Cocaine.—Dr. S. A. Hazen, of Youngstown, O., writes that Dr. Davis, of the same place, enucleated an eye under cocaine about the first week in December, and was the first to perform that operation with the help of the new anæsthetic.

Cultivation of Leprosy Bacilli, and Vaccination for Leprosy.—We learn from California exchanges that Hawaiian physicians have been studying the parasitic origin of leprosy. Experiments are being carried out with the bacillus, and an effort has been made to cultivate it, so that vaccination for leprosy may be practised. An experiment is now being tried in the case of a condemned criminal, who has been inoculated, and whose case will be carefully studied, in the hope that something definite may be learned concerning the dread disease. So much attention has been given to the subject in Honolulu, and the disease is spreading so fast, that the white population has become aroused to the necessity for doing something to protect themselves.

Death of Dr. Charles Clay, one of the Revivers of Ovariotomy.—We learn that Dr. Charles Clay, of Manchester, England, has recently been stricken down by paralysis at the age of eighty-three, and is not expected to live. Mr. Lawson Tait writes of him: "So far as has yet been discovered, the first ovarian tumor removed in England was by the hands of Dr. Charles Clay, on September 27, 1842; all others, with the exception of one by Houston, and another by Lizars, in Scotland, were clearly parovarian cysts. In 1843 Mr. Aston Key removed both ovaries, and Mr. Bransby Cooper also tried the operation in that year, but it was not till 1844 that there was a successful case in London, operated on by Dr. Frederick Bird, followed by one in the practice of Mr. Lane. In the provinces, however, many successful cases had been done. In June, 1848, Dr. Charles Clay published a series of 32 cases with 10 deaths, and in 1857 he had completed 77 cases with 24 deaths, and he continued to operate for many years, until he had performed 395 operations, with 101 deaths, his total mortality being fractionally above twenty-five per cent. The only revival of ovariotomy which Sir Spencer Wells can lay any claim to, is after its temporary decadence for two and a half years in London in the hands of Mr. Baker Brown; and even upon this point the evidence is by no means satisfactory. But if it is to be contended that, from the time of McDowell till 1857, there was nothing done in ovariotomy, and that the revival took place in that year at the hands of Mr. Spencer Wells, I say it may as well be claimed for him that he revived the moon. To Dr. Charles Clay is due the credit of having established ovariotomy in England, and carried it through its early struggles. His practice was a mistaken one in the use of the long ligatures, but its results were certainly no worse than those obtained by the clamp. Dr. Clay, unfortunately, did not know of the results obtained by Nathan Smith from the use of the short ligature. Had he done so, abdominal surgery would have been half a century in advance of its present position, for then it would have been impossible for the clamp ever to have made its appearance. Baker Brown re-introduced Nathan Smith's principle, and Keith has brought it to perfection."

The Therapeutic Effect of Prayer.—Dr. L. A. Wohlfarth, in the *Medical Index*, reports a very excellent result from prayer. His patient was a woman who, two weeks before, had been delivered of a child. She suffered from great mental excitement and a delusion that she must die. He says: "Acting on a hypothesis of psychological therapeutics, and thinking that a 'prayer' offered by an old, respected, and much desired friend like Mr. Davis, possibly might have a salutary influence on a diseased mind to dispel the 'notion of dying,' accompanied by Mr. Moses, I called on Mr. Davis and requested him to see Mrs. Thomas, and 'if occasion should offer,' to give prayer, but to formulate the language of his prayer in a hopeful and inspiring tone. The old gentleman consented, and at my next visit I found the result of his 'prayer' almost miraculous. The 'notion of dying' had nearly left my patient; she was doing well. The puerperal mania was cured, but the patient subsequently died from hypostatic pneumonia."

Fewer Medical Students.—Reports seem to show that in most of the larger medical colleges the number of students this year is somewhat below the average. If this is a fact, it is to be attributed to the hard times, and to the very universal opinion among non-teaching doctors that there have been too many students in the past.

Suicide of a Physician accused of Malpractice.—Vienna medical circles are excited over the suicide of a Dr. Spitzer, who was charged with maltreatment of a case, his applications to an injured limb having apparently been the cause of acute gangrene. During the course of his trial, Dr. Spitzer disappeared, and his body was subsequently found in the Danube.

Renal Calculus Caught in the Urethra, Retention of Urine, Convulsions, Urethrotomy, Cure.—Dr. E. D. Coonley, of Mariner's Harbor, Staten Island, was called to see a boy, aged twelve, suffering from severe pain in the side. An opiate was given and relief followed. Three days later the doctor was called again and found the boy in convulsions and apparently dying. He had not passed water for two days. An obstruction was found in the urethra near the junction of the scrotum and perineum. External urethrotomy was performed, and an ovoid uric acid calculus, weighing 13 grains, was extracted. The boy recovered.

Reports of Societies.

NEW YORK ACADEMY OF MEDICINE.

Stated Meeting, December 18, 1884.

FORDYCE BARKER, M.D., LL.D., PRESIDENT, IN THE CHAIR.

THE PRESIDENT appointed Drs. H. D. Nicoll and S. F. Morris, who, with the Assistant Secretary, shall constitute a Board of Inspectors at the next annual meeting, to be held January 15, 1885, the first Thursday in the month falling on the first day of January.

The President then called Dr. R. F. Weir, First Vice-President, to the Chair.

DR. WEIR announced as the next order of business

REPORT OF THE COMMITTEE ON ETHICS, ON CHARGES PREFERRED AGAINST A FELLOW.

DR. ELLSWORTH ELIOT remarked that it had been customary, and moved that the hearing of the report be postponed until after the scientific business of the evening. Lost.

DR. W. T. WHITE said it had been customary, and moved that the Academy go into executive session, which would exclude the representatives of the daily press that had no right to the proceedings, and also remove medical students and others who had no right to participate.

DR. E. D. HUDSON, Jr., opposed the motion on the ground that one side of the question, namely, that presented by the accusers, had already in some mysterious way, perhaps not so mysterious after all, found publication in some of the daily papers, and now *all the proceedings* should be open and above board. The Academy should not countenance any "star-chamber" inquiry.

DR. F. V. WHITE favored an executive session because it was improper for the Academy to wash its "dirty linen" in public, and besides it was contrary to the spirit of the by-laws and constitution of the organization.

The motion was put and lost.

DR. ANDREW H. SMITH, Chairman of the Committee on Ethics, then read the *unanimous* report of the Committee, reached as the result of repeated sittings conducted with all possible precautions at every step of the entire investigation. It was that the charges against a Fellow, of having claimed a degree of M.D., which he never possessed, and of having falsely signed his name upon the signature book of the New York Academy of Medicine, also upon the register of physicians at the office of the Clerk of the County of New York, in 1880, and at divers times and places, were unsustained, the Committee finding them to be without foundation and absolutely untrue.

The report was signed by the Chairman and the other members of the Committee, Drs. V. P. Gibney, C. A. Leale, H. E. Crampton, and C. D. Varley, Secretary.

The report was received with immense applause, and was accepted and adopted without a dissenting voice.

DR. C. R. AGNEW moved that the report of the Committee of Ethics be spread *in full* upon the minutes of the Academy. Carried.

DR. J. W. HOWE remarked that it appeared from the report of the Committee that the signature of the accused in the book of signatures of the Academy had been tampered with, probably falsified, and he therefore moved that a Committee of Three be appointed by the Chair to investigate with reference to the source of the mutilation of the records, and to report to the Academy. Carried.

The VICE-PRESIDENT announced that he would appoint the Committee subsequently.

DR. JOHN C. PETERS directed attention to the point that it was the duty of the accusers to have complied with the by-laws, first notified the accused that the charges were to be made, and then called for a *court medicale*, in which efforts could be made to adjust the differences by arbitration; that only when efforts had failed in this direction to accomplish the desired end, were the accusers justified in bringing the subject before the Academy. He therefore moved a vote of censure for the accusers because they did not observe the rules of professional courtesy laid down by the State Medical Society and the by-laws of the Academy.

DR. ROOSA moved to amend by asking the Fellows who signed the charges to send in their resignations.

DR. PETERS accepted the amendment.

DR. JACOBI was willing to vote to censure the Fellows who signed the charges, but was not ready to vote for Dr. Roosa's amendment, which, if carried, would be practically an expulsion.

DR. WYLIE thought it perhaps not exactly fair to ask *all* the Fellows who signed the charges to resign.

DR. POOLEY moved as an amendment that the Fellows who signed the charges be expelled.

DR. HENRY supported Dr. Pooley's amendment with a vigorous speech, in which he claimed that not a scintilla of testimony had been adduced by the accusers which would be admitted as evidence in a court of law, and that every one, from the giant of the outrage to the babies who signed with him, deserved expulsion. There was not a club or association of gentlemen anywhere in the world that would not expel any member for the same offence, and without another word being said in their condemnation other than that which had appeared in the most admirable report of the Committee.

DR. J. C. DALTON thought that after hearing the complete, thorough, and exhaustive report of the Committee on Ethics, the Fellows should be satisfied that the question had been set at rest. The report was exactly what the Academy wanted, and he felt that the Fellows should be content to adopt the report, because they could not have anything that was better, and it was very easy to have something worse. He therefore moved to lay upon the table all the motions and amendments offered after the unanimous adoption of the report.

THE PRESIDENT was allowed to say that he most heartily approved of the sentiments expressed by Dr. Dalton; that he felt satisfied with the action which the Academy had taken, and that he thought it would be injurious to resort to any extreme measures.

The motion and the amendments were then withdrawn, and the Academy proceeded with the regular order of business.

THE PRESIDENT, on resuming the chair, said: "Here endeth the second lesson. The Academy will now resume its scientific work, which has been continued harmoniously for thirteen months, until interrupted by this supreme effort to elevate the character of the medical profession."

At the request of the author, the reading of Dr. Gaspar Griswold's paper on "Electricity as a Cardiac and Respiratory Stimulant," was postponed until some future meeting.

DR. A. M. JACOBUS introduced the following resolutions, with a preamble, which were adopted.

MEDICAL EDUCATION AND A STATE BOARD OF EXAMINERS.

Resolved, That the Committee on Medical Education of this Academy be instructed to inquire into the question, whether it be advisable to have a "State Board of Examiners," and also as to the import of any proposed bills and such other matters pertaining to the general subject as to them shall appear pertinent.

Resolved, That the Committee be directed to report at the stated meeting of the Academy, to be held January 15, 1885, and that such report be made one of the special orders for that meeting.

The Secretary, DR. KATZENBACH, read a letter received from Dr. S. T. Hubbard, in which he withdrew his name from the list of nominations for President.

The resignation of Dr. Horatio Gomez was accepted, and the time for Dr. Woolsey Johnson to sign the by-laws extended, after which the Academy adjourned.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Stated Meeting, December 22, 1884.

DANIEL LEWIS, M.D., PRESIDENT, IN THE CHAIR.

THE PHYSIOLOGICAL AND THERAPEUTIC EFFECTS OF THE COCA LEAF AND ITS ALKALOID.

DR. WILLIAM OLIVER MOORE read a paper on the above subject in which he reviewed the literature of the drug, and gave an account of the various uses which have been made of it. Especial attention was directed to its general tonic effects, its use in the treatment of affections of the larynx, pharynx, and tonsils, and in the treatment of the opium habit, where it had been reported to be of service.

Attention was then directed to the use of the alkaloid cocaine, its first effect being to produce anæmia, and second, anæsthesia of the parts to which it is applied, the effect being especially marked on mucous membranes. Instillations into the eye of the affected side had proved very serviceable in cases of hemicrania, and Dr. Moore suggested that the alkaloid might afford relief in seasickness. In operations involving the skin the effect of the alkaloid was very much enhanced by first removing the epidermis.

The discussion was opened by DR. ROOSA, who thought that the enthusiasm of the ophthalmologists might be excused, even in the glare of the luminous remark in THE MEDICAL RECORD concerning "the lonesome man," since it had been established beyond doubt that in a very large number of operations heretofore requiring the use of general anæsthetics, the smothering cone, and not only that but, what was more important, the pain, had been done away with, a triumph which no one was better qualified to appreciate than the editor of THE MEDICAL RECORD himself.

The only disappointment which Dr. Roosa had to record was concerning the value of cocaine in otology, where he was not as yet at all satisfied as to its true place as a therapeutic agent. It should be remembered, however, that to determine the true therapeutical effect of drugs was a much more difficult problem to solve, than to merely learn what the effects were which these drugs produced when applied locally.

DR. WILLIAM M. POLK, with reference to gynecological practice, had found that the best method of using cocaine was by hypodermic injection. For example, in several cases of laceration of the cervix, he had been able to operate without pain to the patient, by injecting four minims of a four per cent. water solution into the tissue of the cervix on each side shortly before beginning with the knife. In certain patients belonging to this class, therefore, he believed it had a limited application.

In the removal of the wire sutures after ordinary perineorrhaphy, he had found it especially serviceable. He had also used it successfully before applying the actual cautery to carcinoma of the cervix extending to the vagina, and also before using caustics in the treatment of chancre and chancroid.

With the assistance of Dr. Le Fevre, of Bellevue Hospital, the hypodermic use of cocaine behind and in front of the cervix uteri, had mollified the severity of labor pains very markedly.

A curious fact also obtained in those cases, namely, there was anæsthesia of the cornea.

In one case he had performed hepatotomy, for hydatid cyst and abscess, with the aid of cocaine applied locally. The local anæsthetic was used, because of the bad general condition of the patient, which contra-indicated the use of either ether or chloroform.

DR. KNAPP had noticed that dilatation of the pupil, *ad maximum*, was not produced by cocaine.

DR. POOLEY thought the use must be abandoned in a certain number of cases occurring in children, because of the fright and agitation which occurred without the use of a general anæsthetic. He also regarded the method of injecting the orbital tissues as a procedure liable to be attended with disastrous consequences, hence should be adopted only with the greatest care.

In one case he had noticed marked toxic effect of the drug ten minutes after a single instillation of a four per cent. solution into the eye. There was pronounced vertigo, and the pupil in that case was apparently dilated *ad maximum*. He had relieved the patient in one case of hemicrania, by a single instillation into the eye upon the affected side.

DR. HOPE spoke of the efficacy of cocaine as a local anæsthetic in a case of laryngeal growth.

DR. F. A. CASTLE referred to points in the literature of the subject and also in the modes of obtaining the alkaloid. He also directed attention to the local anæsthetic effects produced by certain other drugs, as cannabis indica, kola-nut, etc., with which experiments were being made.

Practically, he had used cocaine in a case of urethral stricture, which he was able to dilate without producing very much pain, and also in a case of sensitive nipples, with considerable benefit.

DR. W. F. MITTENDORF thought that the peculiar effect of cocaine was produced by its action on the capillaries, first causing anæmia about the terminal nerve-fibres, and that this anæmia was the principal factor in developing the local anæsthesia.

With reference to the mydriatic effect, he believed it to be due to the action of the alkaloid upon the sympathetic nerve-fibres. He did not agree with Dr. Pooley, and thought that the best effects of the drug were obtained in the treatment of children. The pressure of the eye-speculum sometimes complained of, he had been able to overcome by the use of his own instrument.

DR. J. LEONARD CORNING spoke of the effect produced by coca in the central nervous system, and had found it especially serviceable in the treatment of anæmic, hysterical, neurasthenic females, the spinal concussion of Erichsen, etc.

DR. WILLIAM H. THOMSON, from a tolerably large experience in both hospital and private practice, had reached the conclusion that the value of coca as a medicine was about equal to that of boneset; not quite so good as fresh boneset. This, however, did not at all militate against its value as a local anæsthetic.

He had used cocaine as a local application in the treatment of pruritus vulvæ, with exceedingly satisfactory results.

DR. SELL spoke of the use of avena sativa in the treatment of the opium habit.

THE SECRETARY read the following communication from DR. A. P. MEYLERT, which had a bearing upon the question of the therapeutical value of coca, and also of the value of the coca and its alkaloid, in the treatment of the opium habit:

"So much has been written about the value of this drug in cases of opium habituation that I have many times endeavored to use the various preparations of coca leaf in this disorder, but little advantage has resulted therefrom. Alcoholic preparations were contra-indicated in many cases complicated with chronic alcoholism, and in my judgment were hazardous in other cases from the tendency in habit cases to inebriety. The fluid extract of coca in small doses was without apparent effect, and in large doses was nauseating. The solid extract in pill form seemed almost inert.

"It was therefore with gladness that I read of the new anæsthetic—the cocaine alkaloid—and hastened to give it a trial as a substitute for morphia in habit cases.

"I have used it both by the mouth and subcutaneously, using a solution of sixteen grains in the fluid ounce, being one grain in thirty minims.

"I will give the general results briefly so far as observed, reserving details for the future.

"Administered alone in doses of five to ten minims, there was no effect which I could fairly attribute to the

drug. In doses of fifteen to twenty minims, equal to one-half to two-thirds of a grain, there was little if any relief from pain or from the hyperæsthesia and general uneasiness of the patient, but the face became pallid, the pulse small, and a sense of exhaustion followed. From this, however, the patient quickly rallied on administering the usual dose of morphia.

"When the alkaloid was administered subcutaneously *with* a solution of morphia, the only perceptible effect of the cocaine was to enhance somewhat the exhilarating effect of the morphia. It did not, however, prolong the period of quiescence induced by the dose of morphia, nor could a less quantity of the narcotic satisfy the patient.

"On the day subsequent to the administration of the cocaine, however, a larger reduction of the morphia was easily tolerated.

"The above doses are doubtless large, except for those taking five to thirty grains of morphia daily.

"I am therefore pursuing these investigations with great interest, and hope to hear the experience of other observers in this field."

The discussion was closed by Dr. Moore, after which the Society adjourned.

New Instruments.

FLEXED SPLINTS.

Dr. W. D. Kearns, of Pittsburg, Pa., introduces, in a paper read by him before the Allegheny County Medical Society, somewhat of a novelty in the form of "flexed splints." In presenting them to the profession, he has been encouraged and sustained not only by personal tests, but also by the approval of recognized authority, in regard to the soundness and feasibility of the principles evolved, especially referring to Colles' fracture.

Dr. Kearns reviews the several varieties of splints usually employed, condemning some, and calling attention to the incompetency of the straight padded splint to secure the necessary angles of flexion of the wrist-joint and metacarpo-phalangeal articulation; at the same time suggesting the congruity of a flexed splint. He considers the latter less complicated than the padded straight splint, inasmuch as the bend of the wrist and hand is at once permanently fixed. Whether, he advises, the fracture of the radius is transverse, oblique, more or less longitudinal, or more or less comminuted, the conditions governing the form of the retaining splints, after complete reduction, are equally exacting, and are best subserved by flexed splints, through their greater efficiency in forestalling the formidable impairment of the functions of flexion, extension, pronation, and supination.

He also directs attention, comparatively, to fractures of the radius and ulna, and the necessity, after complete reduction, of maintaining relaxation of the several muscular tendons, fasciæ, and ligaments, and that the continued maintenance of this relaxation is also of paramount importance in connection with fractures of the wrist; and it is claimed that flexed splints will admit and secure correlative relaxation. Flexed splints, he finds, propose a ready, comfortable, and efficient maintenance of all appreciable required muscular relaxation of the extensors and flexors to their insertions along the phalanges, and of the muscles and fasciæ of the hand and thumb; and, also, may claim a great advantage in securing the more early, free, and full use of the hand.

The insertion of thin, narrow, interosseous pads are employed, and materially control the displacing influences of the pronator quadratus and the supinator longus. Interosseous pads, he finds, will also fully compensate the pistol-shaped splint of Nélaton, in preventing the approach of the fragments to the ulna. Short splints, or a short palmar splint and a long, straight dorsal splint, he considers inadequate to immobilize the proximal joint. An "immediate" bandage, if loosely and intelligently applied, will advantageously subserve its purpose in preventing muscular contraction.

He observes that the angle of flexion of the dorsal splint (Fig. 1) is made studiously sharp at the wrist, carefully evading pressure on the carpal bones. This angle should also be of degree sufficient (about 122° Fig. 1), by the backward bend of the hand, to secure complete relaxation of the posterior muscular tendons; while the anterior relaxation is effected by the partial closing of the hand. The splints admit a slight drooping of the hand (the natural curve of uncontrolled muscular action).

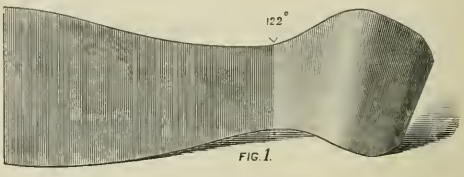

FIG. 1.

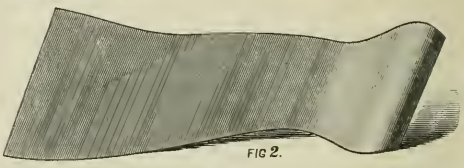
FIG. 2.

The accompanying woodcut traces the anterior edge of the palmar splint (Fig. 2) as a continuous line fully over the muscular prominence of the three flexors of the palmar surface of the thumb, preserving their full unconstraint, whence it inclines underneath the thumb along the index finger, restoring the width of the splint to that of the hand. Wooden splints, which can now be readily sawn, he considers practically the best. They can, however, be constructed of sheet zinc, which, judging from the specimens sent us, would also serve an excellent purpose.

Army and Navy News.

Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from December 7 to December 20, 1884.

Hammond, John F., Colonel and Surgeon. Retired from active service, by operation of law, on December 7, 1884, under provision of Act of Congress approved June 30, 1882. S. O. 287, A. G. O., December 8, 1884.

McKee, J. C., Major and Surgeon. Leave of absence still further extended one month. S. O. 288, A. G. O., December 9, 1884.

Porter, Joseph Y., Captain and Assistant Surgeon. Sick leave of absence extended four months, on surgeon's certificate of disability. S. O. 286, A. G. O., December 6, 1884.

Kane, John J., Captain and Assistant Surgeon. From Department of the East to Willet's Point, New York. S. O. 286, A. G. O., December 6, 1884.

Banister, J. M., Captain and Assistant Surgeon (Fort Adams, R. I.). Granted one month's leave of absence, on surgeon's certificate of disability. S. O. 251, Department of the East, December 9, 1884.

Gray, Charles C., Major (retired). Died at Geneva, N. Y., November 22, 1884, instead of November 26th, as heretofore announced. Circular Orders, A. G. O., December 8, 1884.

Lauderdale, John V., Captain and Assistant Surgeon. Fort Sully, D. T. Granted leave of absence for one month, to take effect about December 20, 1884. S. O. 146, Department of Dakota, December 9, 1884.

COMEGYS, E. T., Captain and Assistant Surgeon. Granted leave of absence for one month. S. O. 234, Department of the Missouri, December 8, 1884.

PILCHER, J. E., First Lieutenant and Assistant Surgeon. Ordered to Fort Custer, M. T., for duty. Order assigning him to duty at Fort A. Lincoln, D. T., amended. S. O. 145, Department of Dakota, December 8, 1884.

Official List of Changes in the Medical Corps of the U. S. Navy, during the week ending December 13, 1884.

CRAIG, T. C., Passed Assistant Surgeon. Detached from Alliance and placed on waiting orders. December 6, 1884.

CURTIS, L. W., Assistant Surgeon. To the Naval Hospital, Chelsea. December 9, 1884.

GAINES, J. H., Passed Assistant Surgeon. Present duty continued.

GREEN, E. H., Passed Assistant Surgeon. Special duty at Museum of Hygiene, Washington. December 11, 1884.

MEURRAY, J. M., Passed Assistant Surgeon. Detached from Naval Hospital, Chelsea, to the Flagship Hartford. December 9, 1884.

WOOLVERTON, T., Surgeon. To the Shenandoah. December 6, 1884.

Correspondence.

CARD FROM DR. FORDYCE BARKER.

TO THE EDITOR OF THE MEDICAL RECORD.

SIR: Will you allow me a small space to express the deep feeling which has touched my heart by the reception of a great number of letters since last Friday morning?

As from members of the medical profession of this city and Brooklyn, I have already received more than two hundred, and very many letters and telegrams from other places, it is quite impossible for me to send an acknowledgment to each writer, I must pray my friends to accept my thanks through the medium of your journal.

FORDYCE BARKER.

24 EAST THIRTY-EIGHTH STREET,
Monday evening, December 22, 1884.

Medical Items.

CONTAGIOUS DISEASES—WEEKLY STATEMENT.—Report of cases and deaths from contagious diseases reported to the Sanitary Bureau, Health Department, for the week ending December 20, 1884:

Week Ending	Typhus Fever.	Typhoid Fever.	Scarlet Fever.	Cerebro-spinal Meningitis.	Measles.	Diphtheria.	Small-pox.	Yellow Fever.
Cases.								
December 13, 1884.....	0	27	70	6	118	68	0	0
December 20, 1884.....	0	25	106	5	130	64	0	0
Deaths.								
December 13, 1884.....	0	9	10	4	13	27	0	0
December 20, 1884.....	0	10	24	6	28	31	0	0

THE PRACTICE OF MEDICINE IN RUSSIA.—A recent number of the *Aerztliches Vereinsblatt* contains an interesting article on "Medicine in Russia," written by a German physician practising in that country. The number of physicians in Russia, according to the official statistics for 1883, is 15,231. Most of these are collected in the cities, while the country is so poorly supplied that there are districts as large as Saxony or Bavaria where there is but one physician. There are medical faculties in Kief, Kazan, Charkov, Moscow, Warsaw, Helsingfors, and Dorpat, the first five of which give instruction in the Russian language, while at Helsingfors Swedish is spoken, and at Dorpat German. There is, besides, an army medical school. In the Russian schools there is a five-years' graded course with yearly examinations. At the end of this course an examination must be passed for the title of physician, after which, if it is so desired, the candidate may pass on to the doctorate examination. In Dorpat there is no graded course, and but two examinations are held. The first, called the *examen phylosophicum*, is passed usually after two or three years' study, and embraces the subjects of chemistry, physics, botany, mineralogy, zoölogy, anatomy, physiology, general pathology, and dietetics. If a student allows four years to elapse after his philosophical examination before coming up for the *rigorosum*, he is obliged to pass the former over again. It sometimes happens that students who become interested in some special subject pass this examination three or four times before coming up for their final. At the final examination, the *examen rigorosum*, the student chooses whether he will try for the title of physician or of doctor. In order to obtain the latter degree a more exact knowledge of theoretical subjects is necessary, and in addition the candidate must write two theses, on given subjects, in Latin. If he is thus far successful he must attend and take part in a dissertation. A doctor ranks as eighth in the classes defined by the State, while a physician is one step farther down the scale. No one can receive an appointment as head physician in a hospital or become a "privat-docent" unless he possess a degree of M.D. Russia has a paternal government, and her medical sons are not neglected, but are placed under the care of the Minister of the Interior. The business of the medical division of the Department of the Interior is defined to be to keep an eye "on the industry and scientific ability of the physicians, and to report thereon yearly." It also takes them under its protection when they are subject to unjust attacks. It has further to see that the sick are treated only by physicians of proved skill, and must warn the people against the dangers of employing charlatans. One article of the medical law provides for the punishment of those who employ quacks. The law also gives the department authority to transfer physicians from one place to another as occasion may require: thus in case of an epidemic in a place where physicians are scarce, the Minister of the Interior can send others from places where they are more plentiful. In the matter of fees the law is also explicit, and as the law was framed in 1789 and has never been altered, it may readily be understood that the lawful fees are not exorbitant. For a visit in the city a doctor's legal charge is 30 copecs (24 cents) if he gives a prescription, and 15 copecs (12 cents) if he writes no prescription. For a visit outside of the city he is allowed to ask 60 copecs (nearly half a dollar). A consultation is held to be worth $1.20. A physician's fee is set down at 12 cents with or without a prescription. For applying a blister or giving an enema he is allowed to ask the enormous sum of 6 cents, and a venesection is held to be of equal value. Wet cups are to be applied at the rate of 2½ cents each. An obstetrician who has assisted at a difficult labor may demand $1.20 for his valuable services. These charges are for attending people in moderate circumstances, and the rich are expected to pay a little more. This is the law as it stands upon the statute book, and which can be enforced at any time, but practically, of course, it is a dead letter, in its good features as well as in its bad ones. There are plenty of quacks who enjoy a lucrative practice, just as is the case in other countries, yet occasionally one of these gentry comes to grief. Not long ago a most elegant gentleman settled in St. Petersburg, professing to be an ardent disciple of Hahnemann, and by reason of his fine presence and engaging manners soon acquired a large practice, some of his patients being

members of a grand ducal family. Before long, however, it was discovered that his sole right to practise consisted in the possession of a diploma from the University of Philadelphia, and he was quickly escorted over the border and earnestly recommended to stay there. The number of homœopathists in Russia is small, yet those who are there are divided into two parties, each calling the other a company of charlatans. Their experience with hospitals was not encouraging. Three years ago they started a hospital for the treatment of diphtheria, which for some time had no inmates. Finally, on the advice of a homœopathic general, a soldier sent his child there for treatment. The child very promptly died, and the hospital received no more cases of diphtheria. Russian medical societies are not very flourishing, owing, the writer says, to an every-man-for-himself spirit that exists among the physicians there. The oldest is the Society of Russian Physicians, founded in 1833. The members of this society are intensely national in their feelings, as was evidenced in one of the addresses at their semi-centennial celebration, when the speaker congratulated his hearers that at last Russian medicine had thrown off the German yoke. This feeling was also exhibited in an order recently promulgated by the Minister of War, to the effect that not more than four per cent. of the army surgeons should be Jews. There are five other societies, one of them composed chiefly of German physicians, in St. Petersburg, and seventy-three in the provinces. In addition there are several mutual aid and benefit societies among medical men. Considerable progress has been made in the last decade in medical journalism. The leading journal is the *Vratch* (the Physician), founded by Manassein in 1880. Next to the *Vratch* comes the *Russkaya Medicina* and the *Meditsinski Vestnik*. Another excellent journal, composed principally of abstracts, but containing also some original aricles, is the *Meditsinskoye Obosrenoye*. The organ of the German physicians is the *St. Petersburger Medicinische Wochenschrift*. The writer says that medical journals are not subject to the censorship of the press, but this seems to be an error, for the last-named journal always bears the imprimatur of the censor. At one time there were many female medical students attending a college of their own, but lately they have been frowned upon by the Government (probably by reason of the Nihilist fright), and now their college is in a fair way of extinction. The students for the most part lived a miserable life, half starved and half frozen, and their condition was not much improved after they had finished their studies. They had no assured standing among physicians, and usually practised in the country districts and among the poorest classes.

The Properties of Crotalus.—Crotalus, the poison of the rattlesnake, is obtained from the *crotalus horridus*. Physiological action: Inoculation causes ecchymoses and hemorrhages, by putting an end to the coagulating power of the blood, with febrile heat, anorexia, injected conjunctiva, etc. Therapeutical uses: It was originally introduced by homœopaths, and has been employed for malignant hemorrhagic scarlatina on the principle "similia similibus curantur." Preparations and doses: The poison-bag is removed from the living vipers, and then mixed with glycerine as a preservative. Crotalus is prepared in decimal strengths, the menstruum used being one part of glycerine to three parts of proof spirit; the three decimal dilution is chiefly used. Dr. Havard, of Liverpool, prescribed three drops in a spoonful of water every three or four hours in malignant hemorrhagic scarlatina. It is also used hypodermically in doses of one to three minims.

The Abuse of Tonics.—Dr. Alfred W. Perry, of San Francisco, Cal., writes: "The abuse of tonics is most notably seen in rather stout persons over forty years old. Such persons, without any serious organic disease, complain of weakness or fatigue after slight exertion, pains in the limbs, vertigo, and perhaps of shortness of breath; and as they are frequently rather pale, tonics and stimulants are prescribed for them. The appetite, and thereby the body-weight, may be increased, but the symptoms complained of remain or are aggravated. Let us take up each symptom and analyze it. Normally fatigue is due, according to late researches of Voit and Pettenkoffer, to an accumulation in the muscle of the products of destructive metamorphosis (lactic acid, creotine acid, phosphate of potassium, sarcosine) produced by exercise, and partly to a decrease of the oxidizable muscular substance. By rest, normally, the blood-current washes out these waste products, and the more nearly the blood approaches a standard healthy condition, the more quickly does this take place. The amount of food consumed by an adult should be just what is required to keep up an average body-weight (in proportion to height), and will vary with the work performed. An excess of food digested and absorbed produces a blood too rich, thick, and imperfectly oxidized. This condition is generally marked by a deposit of reddish urates in the urine when cooling. An addition to the blood in such a condition of large quantities of water (by drinking) enables it to dissolve more easily these waste-products of muscle, and so produces a feeling of renewed strength. Witness the increase of uterine action in labor after drinking freely of any kind of tea; the vigor produced in the plethoric or gouty by drinking freely any kind of mineral water, and using low diet; the undoubted benefit of the present fashion of drinking freely of hot water has the same explanation. The muscular pains are a slight kind of cramp or muscular rheumatism, which is, as Anstie (in his work on neuralgia) defines it, '*pain produced in a muscle obliged to work when its structure is imperfectly nourished or impaired by disease.*' The short breath depends on a relative insufficiency of the heart's action. The heart, without being at all diseased, is often incapable of maintaining the circulation properly with its incidental variations. Let us take the example of a man five feet eight inches in height, one hundred and fifty pounds in weight, and let him increase in weight to two hundred pounds while performing a moderate, and perhaps a decreasing amount of labor. His heart is unable to propel the blood properly through the area of two hundred pounds of body-weight, involving about twenty-five per cent. more work, because the heart-muscle has not increased in bulk and vigor at all. If this man's weight had increased while performing hard work, we might be sure that the cardiac muscle had grown in proportion. Any sustained increase of tension of the circulation causes a physiological hypertrophy of the heart. But where the body-weight increases with a decrease of labor, and an increase of food or alcoholic stimulants, we may be sure that there has been no physiological cardiac hypertrophy. The vertigo often met with in these cases may be the result of a cerebral anæmia. This when conjoined to pallor is usually an indication for tonics and iron. There is no poverty of the blood or general anæmia, the surface is pale from insufficient filling of the capillaries from want of heart vigor. The conditions above cited need a treatment entirely opposed to a tonic one. They need alkalies to assist in breaking down tissue, plenty of water to carry away the broken-down tissues, and a little increase in exercise with a restricted diet."

Harvey as a Student of Nature.—In the Harveian oration for this year Dr. Reynolds lays stress upon the fact that Harvey was always studying and seeking to interpret *nature*. "He was one of her keenest and most devout interpreters; in reverence he knelt before her, and asked her questions; he cross-examined her, but in no unfriendly tone. Nature to him was a perfect verity, the one witness that could never be absorbed or shaken, the one witness in whom there could be no false way, the one witness who could not lie. And by such a method only must science ever be advanced; it is thus that great discoveries are to be achieved, thus that we must seek to leave our footsteps on the sands of Time."

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